

COUNTWAY LIBRARY



HC 31AY 8

BOSTON  
MEDICAL LIBRARY  
8 THE FENWAY









# THE JOURNAL

*of the*  
MISSOURI STATE MEDICAL ASSOCIATION

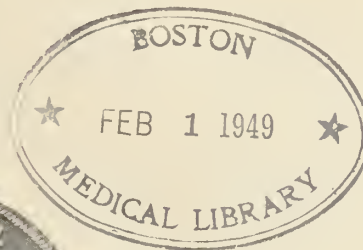
VOLUME 46  
NUMBER 1

JANUARY, 1949

SINGLE COPY, 40 CENTS  
PER YEAR, \$3.00

## ORIGINAL ARTICLES

Child Health Services in Missouri



## EDITORIALS

Annual Session

A. M. A. Interim Session

Father Schwitalla

Memorial in Honor of Dr. Bredeck

Missouri's Mental Institutions

*(Contents Index Page 5)*

ANNUAL SESSION, MARCH 27-30, 1949

# criteria in syphilotherapy MAPHARSEN<sup>®</sup>



PARKE, DAVIS



"Therefore, more than in any other disease, it is necessary in the treatment of an individual patient with syphilis to follow a therapeutic regimen which, after *long-term study* in *large series of patients*, has been established as *satisfactory* for the particular type of syphilis under consideration."\*

# *an arsenical of choice in the treatment of syphilis*

*long-term study*

more than a decade of clinical evaluation.

*large series of patients*

over two hundred million injections already administered.

*satisfactory*

high therapeutic effectiveness with notable safety in causing disappearance of spirochetes, healing of lesions and reversal of seropositivity in a large percentage of cases.

MAPHARSEN (oxophenarsine hydrochloride, P. D. & Co.) is supplied in single dose ampoules of 0.04 Gm. and 0.06 Gm., boxes of 10, and in multiple dose ampoules of 0.6 Gm. in boxes of 10.

\* Cecil, R. A.: A Textbook of Medicine, Philadelphia, W. B. Saunders Co., 1947, p. 376.

COMPANY • DETROIT 32, MICHIGAN

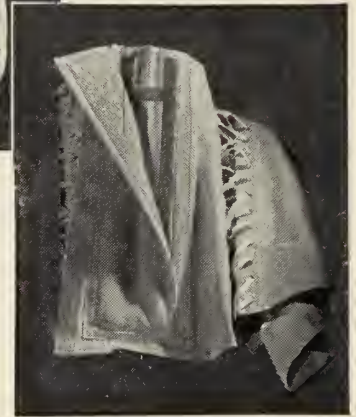


# CAMP SUPPORTS *for the* LOW BACK

Discussing the general treatment of low back pain in a recent article, an orthopedic surgeon\* comments on supports (among other items) as follows: "The second remedy tried by time is further rest provided by support after the patient gets out of bed. Various corsets, braces, and casts have been used and the one criterion is that they be well fitted and do the work intended."



For the Intermediate-to-Stocky Type of Build



The Camp lumbosacral support (illustrated) fits down over the gluteal region and restricts the motion of the pelvic and lumbar joints. The lower adjustment following about the major portion of the pelvic girdle is a prime factor in relieving the weight-bearing joints of the lower spine.

The support lends itself readily to reinforcement with the Camp spinal brace (illustrated). The brace is made of spring steel and comes in varying lengths — twelve, fourteen, sixteen, and eighteen inch lengths. Aluminum uprights and pads are also provided by Camp for reinforcement of orthopedic supports.

Camp fitters are trained and supervised by nurses and instructors.

*\*Hugh T. Jones, M.D.*

*Low Back Pain from the Orthopedic Standpoint*

*California Medicine*

*Vol. 68, February, 1948*

**S. H. CAMP and COMPANY • JACKSON, MICHIGAN**

*World's Largest Manufacturers of Scientific Supports*

Offices in New York • Chicago • Windsor, Ontario • London, England



## CONTENTS

Child Health Services in Missouri.....	17	News Notes .....	44
President's Page .....	42	Musings of the Field Secretary.....	46
Editorials—		Deaths .....	46
Annual Session .....	43	Tuberculosis Abstract .....	48
American Medical Association Interim Session...	43	Society Proceedings .....	50
Father Schwitalla .....	43	Woman's Auxiliary .....	53
Memorial in Honor of Dr. Bredeck.....	44	Book Reviews .....	53
Missouri Mental Institutions .....	44	Commercial Announcement .....	70

Entered as Second-Class Matter, February 18, 1925, at the Post Office at Fulton, Mo., under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1003, Act of October 3, 1917, authorized July 30, 1918. Business Office, 1201-5 Bluff St., Fulton, Mo., and 623 Missouri Building, St. Louis, Mo., Editorial Office, 623 Missouri Building, St. Louis, Mo. Return postage guaranteed. Printed by The Ovid Bell Press, Inc., Fulton, Mo.

# THE MAJOR CLINIC ASSOCIATION

3100 Euclid Avenue, Kansas City, Missouri

A Well  
Equipped  
Institution  
for the  
Treatment of  
Nervous and  
Mental  
Diseases and  
Alcohol,  
Drug and  
Tobacco  
Addictions



Beautiful  
Location  
Large, Well  
Shaded  
Grounds,  
Spacious  
Porches,  
All Modern  
Methods for  
Restoring  
Patients to a  
Normal  
Condition

**HERMON S. MAJOR, M.D.**  
Medical Director

**HERMON S. MAJOR, JR.**  
Business Manager

**AMERICAN MEDICAL ASSOCIATION**

President, Roscoe L. Sensenich, South Bend, Ind.  
President-Elect, Ernest Edward Irons, Chicago.

Annual Session, Atlantic City, June 6-10, 1949

**MISSOURI STATE MEDICAL ASSOCIATION**

91st Annual Session, Kansas City, March 27-30, 1949

President, Robert Mueller, St. Louis.  
President-Elect, Wallis Smith, Springfield.  
Vice Presidents, B. E. DeTar, Joplin; D. P. Dyer, Sedalia;  
P. W. Jennings, Canton.  
Speaker, Ralph E. Duncan, Kansas City; Vice Speaker,  
F. T. H'Doubler, Springfield.  
Treasurer, C. E. Hyndman, St. Louis.  
Secretary, W. A. Bloom, Fayette.  
Editor, G. V. Stryker, St. Louis.  
Secretary-Emeritus, R. L. Thompson, St. Louis.  
Field Secretary, Raymond McIntyre, St. Louis.  
Assistant Editor-Business Manager, Helen Penn, St. Louis.  
Executive Secretary, Tom R. O'Brien, 623 Missouri Bldg.,  
St. Louis.

**Delegates to the American Medical Association**

W. L. Allee, Eldon, 1948-1950; alternate, Paul Baldwin, Kennett. Howard B. Goodrich, Hannibal, 1948-1950; alternate, H. L. Mantz, Kansas City. James R. McVay, Kansas City, 1947-1949; alternate, A. J. Campbell, Sedalia. R. E. Schlueter, St. Louis, 1947-1949; alternate, F. G. Pernoud, St. Louis.

**Standing Committees**

Scientific Work—W. A. Bloom, Fayette, Chairman; A. N. Arneson, St. Louis (1951); Rex L. Diveley, Kansas City (1949). Associate Members—Victor B. Buhler, Kansas City; W. J. Stewart, Columbia; Raymond O. Muether, St. Louis.

Postgraduate Course—Raymond O. Muether, St. Louis, Chairman (1951); Edward Massie, St. Louis (1951); Guy D. Callaway, Springfield (1950); M. Pinson Neal, Columbia (1949); Hubert Parker, Kansas City (1949).

Publication—G. V. Stryker, St. Louis, Chairman; V. T. Williams, Kansas City; David V. Lemone, Columbia; H. E. Petersen, St. Joseph; Fred R. Farthing, Springfield.

Public Policy and Public Relations—Arie C. Van Ravenswaay, Boonville, Chairman (1950); F. R. Crouch, Farmington (1951); Armand D. Fries, St. Louis (1949); Howard B. Goodrich, Hannibal (1951); John Growdon, Kansas City (1950). Associate Member—Cyril W. Schumacher, St. Louis.

Defense—Charles E. Hyndman, St. Louis, Chairman (1951); Roland S. Kieffer, St. Louis (1950); L. F. Heimbürger, Springfield (1950); O. B. Zeinert, St. Louis (1949); L. P. Forgrave, St. Joseph (1949).

Medical Education and Hospitals—Dudley S. Conley, Columbia, Chairman (1949); John S. Knight, Kansas City (1951); V. V. Wood, St. Louis (1950); F. T. H'Doubler, Springfield (1950); F. L. Kneibert, Poplar Bluff (1949).

Cancer—E. C. Ernst, St. Louis, Chairman (1950); E. Kip Robinson, Kansas City (1951); Everett Sugarbaker, Jefferson City (1951); William E. Leighton, St. Louis (1949); Paul F. Cole, Springfield (1949).

Medical Economics—Carl F. Vohs, St. Louis, Chairman (1950); Morris S. Harless, Kansas City (1951); C. T. Herbert, Cape Girardeau (1951); George A. Aiken, Marshall (1949); W. A. Bloom, Fayette (1949).

Mental Health—E. F. Hootor, Farmington, Chairman (1951); Paul Hines, St. Louis (1950); Orr Mullinax, Jefferson City (1950); B. Landis Elliott, Kansas City (1949); Frank M. Grogan, St. Louis (1949).

Maternal Welfare—E. Lee Dorsett, St. Louis, Chairman (1949); J. L. Johnston, Springfield (1951); E. E. Wadlow, St. Joseph (1950); J. Milton Singleton, Kansas City (1950); Paul F. Fletcher, St. Louis (1949).

Infant Care—G. V. Herrman, Kansas City, Chairman (1951); Eugene Schwartz, Springfield (1951); H. E. Petersen, St. Joseph (1950); Peter G. Danis, St. Louis (1949); Park J. White, St. Louis (1949). Associate Member—Joseph C. Jaudon, St. Louis.

Health and Public Instruction (McAlester Foundation)—A. W. McAlester, III, Kansas City, Chairman (1950); M. K. Underwood, Rolla (1951); B. E. DeTar, Joplin (1951); Joseph Conrad, Chillicothe (1950); Grayson Carroll, St. Louis (1949).

Constitution and By-Laws—B. Landis Elliott, Kansas City, Chairman (1950); J. H. Summers, Lebanon (1951); John J. Hammond, St. Louis (1950); S. R. McCracken, Excelsior Springs (1949).

Year indicates expiration of term.

Fractures—Daniel L. Yancey, Springfield, Chairman (1949); W. J. Stewart, Columbia (1951); N. S. Pickard, Kansas City (1951); W. R. Bohne, St. Louis (1950); J. Albert Key, St. Louis (1950). Associate Members—Jacob Kulowski, St. Joseph; B. L. Murphy, Hannibal.

Conservation of Eyesight—C. Souter Smith, Springfield, Chairman (1949); Robert Mattis, St. Louis (1951); A. N. Lemoine, Kansas City (1950); C. P. Dyer, St. Louis (1950); Robert S. Minton, St. Joseph (1949). Associate Members—Winfred L. Post, Joplin; Philip Luedde, St. Louis; John McLeod, Kansas City; G. J. Tygett, Cape Girardeau; S. L. Freeman, Kirksville; H. B. Stauffer, Jefferson City; S. Albert Hanser, St. Louis; Anton J. Hummel, St. Louis.

Control of Venereal Disease—A. W. Neilson, St. Louis, Chairman (1949); W. S. Sewell, Springfield (1951); Charles Greenberg, St. Joseph (1950); Hugh L. Dwyer, Kansas City (1950).

Industrial Health—V. T. Williams, Kansas City, Chairman (1951); Horace F. Flanders, Kansas City (1951); E. M. Fessenden, St. Louis (1950); A. M. Ziegler, Kansas City (1949); Charles R. McAdam, St. Louis (1949). Associate Members—Richard A. Sutter, St. Louis; H. M. Roebber, Bonne Terre.

Anesthesiology—Joseph McNearney, St. Louis, Chairman; O. T. Blanke, Joplin; J. J. Merz, St. Louis; Peter DeMaria, Kansas City; Charles White, Kansas City.

**Special Committees**

Physical Medicine—F. H. Ewerhardt, St. Louis, Chairman (1950); F. Garrett Pipkin, Kansas City (1951); Emmett Settle, Rock Port (1950); A. J. Kotkis, St. Louis (1949); John L. Washburn, Versailles (1949).

Tuberculosis—E. E. Glenn, Springfield, Chairman; A. C. Henske, St. Louis; Lawrence E. Wood, Kansas City; J. L. Mudd, St. Louis; Paul Murphy, St. Louis; C. A. Brashear, Mt. Vernon; Wilbur P. McDonald, St. Joseph; I. J. Flance, St. Louis; Florence E. MacInnis, Kansas City.

Study of Cardiac Diseases—A. Graham Asher, Kansas City, Chairman (1949); Drew Luten, St. Louis (1951); A. M. Estes, Jackson (1951); Julius Jensen, St. Louis (1950); Horace W. Carle, St. Joseph (1949). Associate Members—J. William Fleming, Jr., Moberly; Glen W. Hendren, Liberty; C. Braxton Davis, Nevada; Arthur Strauss, St. Louis.

Rural Medical Service—R. W. Kennedy, Marshall, Chairman; E. C. Bohrer, West Plains; Paul Baldwin, Kennett; H. E. Petersen, St. Joseph; Wallis Smith, Springfield; W. A. Bloom, Fayette; W. F. Francka, Hannibal; J. F. Jolley, Mexico; A. L. Hensen, Appleton City; George W. Newman, Cassville; A. S. Bristow, Princeton.

**COUNCILOR DISTRICTS AND COUNTIES IN EACH DISTRICT\***

J. W. THOMPSON, St. Louis, Chairman

E. C. BOHRER, West Plains, Vice Chairman

First District: Councilor, H. E. Petersen, St. Joseph. Counties: Andrew, Atchison, Buchanan, Caldwell, Carroll, Clay, Clinton, Daviess, De Kalb, Gentry, Grundy, Harrison, Holt, Livingston, Mercer, Nodaway, Platte, Ray, Worth.

Second District: Councilor, W. F. Francka, Hannibal. Counties: Adair, Charlton, Clark, Knox, Lewis, Linn, Macon, Marion, Monroe, Pike, Putnam, Ralls, Randolph, Schuyler, Scotland, Shelby, Sullivan.

Third District: Councilor, J. William Thompson, St. Louis; St. Louis City.

Fourth District: Councilor, Otto W. Koch, Clayton. Counties: Franklin, Jefferson, Lincoln, St. Charles, St. Louis County, Warren.

Fifth District: Councilor, J. F. Jolley, Mexico. Counties: Audrain, Boone, Callaway, Camden, Cole, Cooper, Gasconade, Howard, Maries, Miller, Moniteau, Montgomery, Morgan, Osage.

Sixth District: Councilor, R. W. Kennedy, Marshall. Counties: Bates, Benton, Cass, Cedar, Henry, Johnson, Lafayette, Pettis, St. Clair, Saline, Vernon.

Seventh District: Councilor, Edgar C. Virden, Kansas City. County: Jackson.

Eighth District: Councilor, W. S. Sewell, Springfield. Counties: Barry, Barton, Christian, Dade, Dallas, Greene, Hickory, Jasper, Lawrence, McDonald, Newton, Polk, Stone, Taney, Webster.

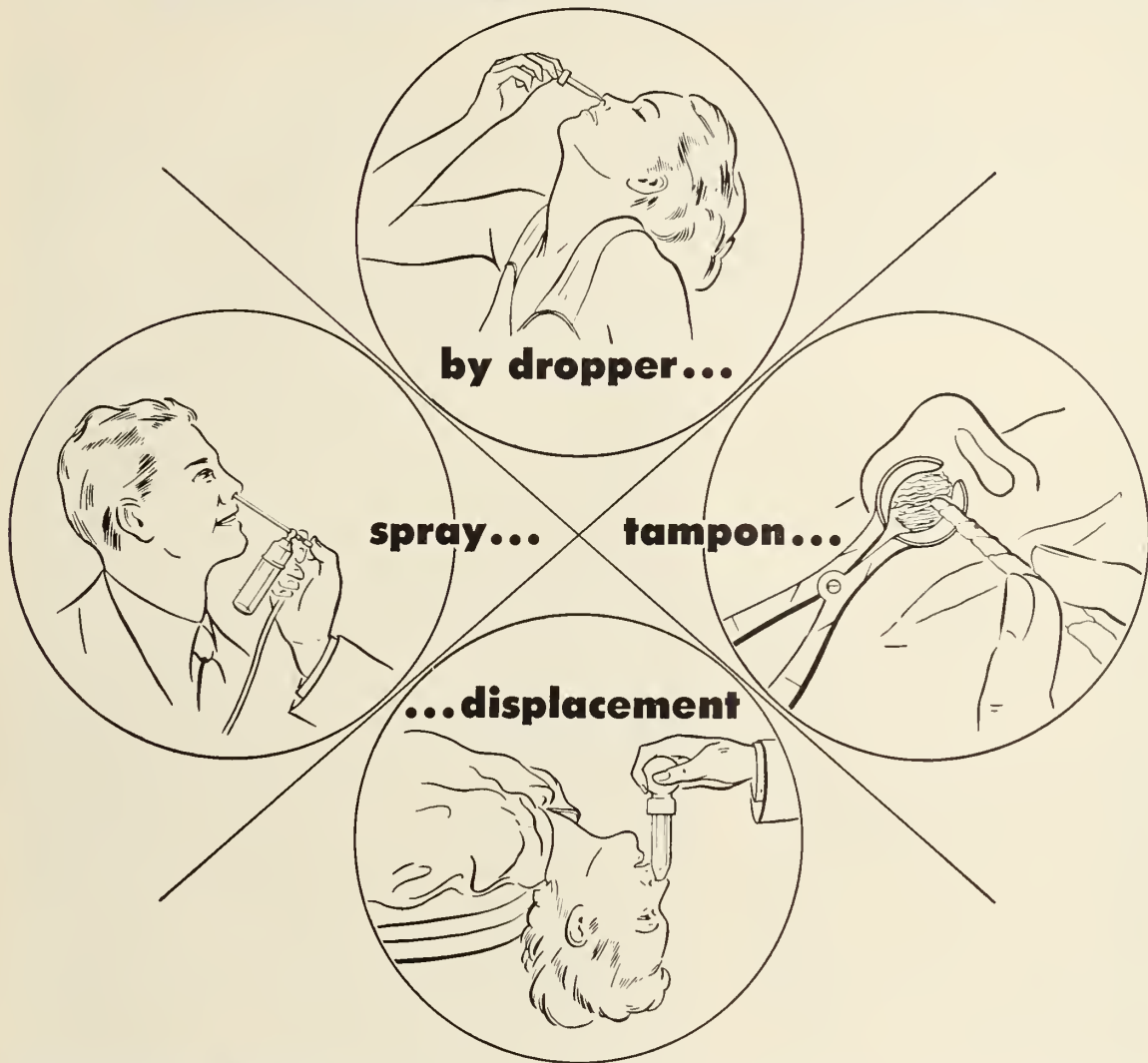
Ninth District: Councilor, Eldon C. Bohrer, West Plains. Counties: Carter, Crawford, Dent, Douglas, Howell, Laclede, Oregon, Ozark, Phelps, Pulaski, Ripley, Shannon, Texas, Wright.

Tenth District: Councilor, Frank W. Hall, Cape Girardeau. Counties: Bollinger, Butler, Cape Girardeau, Dunklin, Iron, Madison, Mississippi, New Madrid, Pemiscott, Perry, Reynolds, St. Francois, Ste. Genevieve, Scott, Stoddard, Washington, Wayne.

Counties in italics are not organized.



# IN COLDS...SINUSITIS



**neo-synephrine** hydrochloride constricts the engorged mucosa surrounding the ostia, permitting free entrance of air and free drainage of secretions. Neo-Synephrine hydrochloride affords prompt and prolonged decongestion with virtually no irritation or congestive rebound.



## neo-synephrine®

**HYDROCHLORIDE**

**BRAND OF PHENYLEPHRINE HYDROCHLORIDE**

¼% solution (plain and aromatic), 1 ounce bottles; 1% solution, 1 ounce bottles; ½% water soluble jelly, ⅝ ounce tubes.

Neo-Synephrine, trademark reg. U. S. & Canada

*Winthrop-Stearns* INC.  
NEW YORK 13, N. Y. WINDSOR, ONT.

# County Societies in Affiliation with the Missouri State Medical Association

COUNTY	DISTRICT	PRESIDENT	ADDRESS	SECRETARY	ADDRESS
Andrew	1	V. R. Wilson	Rosendale	M. L. Holliday	Fillmore
Audrain	5	W. K. McCall	Ladonia	Howard P. Joslyn	Mexico
Barton-Dade	8	Rudolf Knapp	Golden City	Vern T. Bickel	Lamar
Bates	6	A. G. Wooldridge	Butler	John M. Cooper	Butler
Benton	6	T. S. Reser	Cole Camp	James A. Logan	Warsaw
Boone	5	James Baker	Columbia	Helen Yeager	Columbia
Buchanan	1	H. E. Petersen	St. Joseph	Joseph L. Fisher	St. Joseph
Butler	10	Fred J. Biggs	Poplar Bluff	Frank E. Dinelli	Poplar Bluff
Caldwell-Livingston	1	Donald M. Dowell	Chillicothe	Joseph E. Gale	Chillicothe
Callaway	5	Henry Durst	Fulton	R. N. Crews	Fulton
Camden	5	E. G. Claiborne	Camdenton	G. T. Myers	Macks Creek
Cape Girardeau	10	W. F. Oehler	Cape Girardeau	Charles F. Wilson	Cape Girardeau
Carroll	1	W. G. Atwood	Carrollton	John H. Platz	Carrollton
Carter-Shannon	9	F. Hyde	Eminence	W. T. Eudy	Eminence
Cass	6	Herbert A. Tracy	Belton	O. B. Barger	Harrisonville
Chariton-Macon-Monroe-Randolph	2	George W. Hawkins	Salisbury	F. A. Barnett	Paris
Clay	1	W. H. Goodson	Liberty	S. R. McCracken	Excelsior Springs
Clinton	1	S. D. Reynolds	Plattsburg	Wilber G. Spalding	Plattsburg
Cole	5	E. E. Mansur	Jefferson City	Don G. Shull	Jefferson City
Cooper	5	Arie C. Van Ravenswaay	Boonville	J. C. Tinch	Boonville
Dallas-Hickory-Polk	8	Walter W. Tillman, Jr.	Bolivar	C. H. Barnett	Bolivar
De Kalb	1			W. S. Gale	Osborn
Dunklin	10	J. C. Cofer	Kennett	E. L. Spence	Kennett
Franklin	4	Herbert H. Schmidt	Marthasville	F. G. Mays	Washington
Greene	8	A. Denton Vail	Springfield	Kenneth C. Coffelt	Springfield
Grundy-Daviess	1	C. H. Cullers	Trenton	E. A. Duffy	Trenton
Harrison	1	W. A. Broyles	Bethany	L. J. Bunting	Bethany
Henry	6	J. O. Smith	Clinton	R. S. Hollingsworth	Clinton
Holt	1	F. E. Hogan	Mound City	D. C. Perry	Mound City
Howard	5	Morris Leech	Fayette	Francis D. Dean	Fayette
Jackson	7	A. N. Altringer	Kansas City	Kenneth E. Cox	Kansas City
Jasper	8	S. W. Scorse	Joplin	R. M. Ferguson	Webb City
Jefferson	4	Karl V. McKinstry	DeSoto	George Hopson	DeSoto
Johnson	6	O. H. Damron	Warrensburg	Reed T. Maxson	Warrensburg
Laclede	9	R. E. Harrell	Lebanon	James L. Hope	Lebanon
Lafayette	6	Douglas Kelling	Waverly	Jordan Kelling	Waverly
Lewis-Clark-Scotland	2	J. R. Bridges	Kahoka	P. W. Jennings	Canton
Lincoln	4	H. S. Harris	Troy	J. C. Creech	Troy
Linn	2	John R. Dixon	Brookfield	C. A. Campbell	Marceline
Marion-Ralls	2	W. J. Smith	Hannibal	Harry L. Greene	Hannibal
Mercer	1	T. S. Duff	Cainsville	J. M. Perry	Princeton
Miller	5	G. D. Walker	Eldon	Carl T. Buehler, Jr.	Eldon
Mississippi	10	G. W. Whitaker	East Prairie	E. C. Rolwing	Charleston
Moniteau	5	J. P. Burke, Jr.	California	K. S. Latham	California
Montgomery	5	Albert Hirsch	Middletown	J. O. Helm	New Florence
Morgan	5	A. J. Gunn	Versailles	J. L. Washburn	Versailles
New Madrid	10	E. E. Jones	Lilbourn	B. J. Al'enstein	New Madrid
Newton	8	H. C. Lentz	Neosho	J. A. Guthrie	Neosho
Nodaway-Atchison-Gentry-Worth	1	Emmett B. Settle	Rock Port	Charles D. Humbert	Barnard
North Central Counties Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam)	2	P. V. Hart	Coatesville	J. S. Gashwiler	Novinger
Ozarks Medical Society (Barry-Lawrence-Stone-Christian-Taney)	8	J. M. Threadgill	Forsyth	Kenneth Glover	Mt. Vernon
Pemiscot	10	C. C. Castles	Caruthersville	C. F. Cain	Caruthersville
Perry	10	J. J. Bredall	Perryville	L. W. Feltz	Perryville
Pettis	6	C. G. Stauffacher	Sedalia	D. R. Edwards	Sedalia
Phelps-Crawford-Dent-Pulaski	9			M. K. Underwood	Rolla
Pike	2	Eugene Barrymore	Bowling Green	Charles H. Lewellen	Louisiana
Platte	1	L. C. Calvert	Weston	E. K. Langford	Platte City
Ray	1	L. D. Greene	Richmond	T. F. Cook	Richmond
St. Charles	4	J. M. Jenkins	St. Charles	Calvin Clay	St. Charles
St. Francois-Iron-Madison-Washington-Reynolds	10	S. C. Slaughter	Fredericktown	F. R. Crouch	Farmington
Ste. Genevieve	10	R. C. Lanning	Ste. Genevieve	R. W. Lanning	Ste. Genevieve
St. Louis City	3	Llewelyn Sale	St. Louis	F. G. Pernoud, Jr.	St. Louis
St. Louis	4	Martyn Schattyn	St. Louis	Robert C. Kingsland	St. Louis
Saline	6	James A. Reid	Marshall	Charles A. Veatch	Marshall
Scott	10	A. P. Sargent	Sikeston	E. D. Urban	Sikeston
Shelby	2	D. L. Harlan	Clarence		
South Central Counties Medical Societies (Howell-Oregon-Texas-Wright-Douglas)	9	C. F. Callihan	Willow Springs	A. C. Ames	Mountain Grove
Stoddard	10	H. A. Harris	Bloomfield	W. C. Dieckman	Dexter
Vernon-Cedar	6	F. L. Martin	Nevada	Rolla B. Wray	Nevada
Webster	8	C. R. Macdonnell	Marshfield	E. G. Beers	Seymour

# PROVE CAMEL MILDNESS *for Yourself!*



R. J. Reynolds Tobacco Co., Winston-Salem, N. C.

**According to a Nationwide survey:**

**MORE DOCTORS SMOKE  
CAMELS THAN ANY  
OTHER CIGARETTE**

Doctors smoke for pleasure, too! And when three leading independent research organizations asked 113,597 doctors what cigarette they smoked, the brand named most was Camel!



**Test for yourself  
what throat specialists  
reported when a 30-day  
smoking test revealed:**

**"NO THROAT  
IRRITATION  
due to smoking  
CAMELS!"**

**MAKE YOUR OWN 30-DAY CAMEL MILDNESS TEST.** Smoke Camels, and only Camels, for 30 days. Prove for yourself how mild Camels are!

Hundreds of men and women, from coast to coast, recently made a similar test. They smoked an average of one to two packs of Camels a day for 30 days. Their throats were carefully examined by throat specialists. And after a total of 2470 examinations—these throat specialists reported *"not one single case of throat irritation due to smoking Camels!"*

But prove it yourself...in your "T-Zone" (T for Taste and T for Throat). Let YOUR OWN TASTE tell you about the rich, full flavor of Camel's choice tobaccos. Let YOUR OWN THROAT give the good news of Camel's cool, cool mildness.

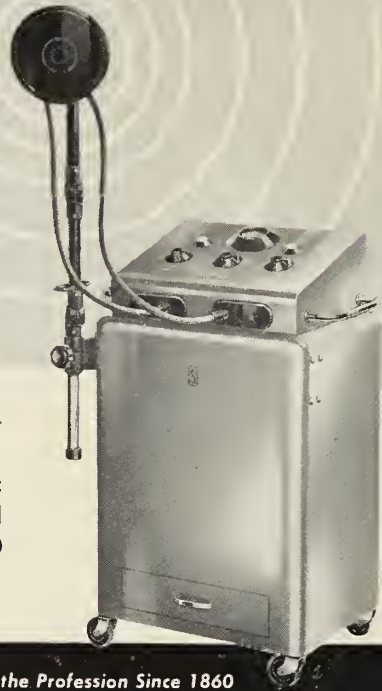


# aloetherm

newest and finest in  
crystal controlled  
short wave  
diathermy

**20F7300**—Full type approval No. D-482 awarded the Aloetherm by the F. C. C. complete with Electromagnetic Treatment Drum, Electromagnetic Inductance Cable with Spacers, Flexible Arm, and Line cord. . . . . \$595.00

*Write for illustrated literature.*



A. S.



COMPANY

*Serving the Profession Since 1860*

1831 Olive Street • St. Louis 3, Missouri



## THE WALLACE SANITARIUM

MEMPHIS, TENNESSEE

*For the Diagnosis and Treatment of Nervous and Mental  
Diseases, Drug Addiction and Alcoholism.*



# Clinically approved

Today, there is a wealth of clinical evidence supporting the use of Meonine as a supplement to the protein-rich diet usually prescribed for liver damage associated with malnutrition, pregnancy, allergy, certain chemical poisons, and alcoholism.

Typical of this evidence is a Beams-Endicott paper\*. The authors reported that a methionine supplement seemed to cause regeneration of the liver parenchyma, in cirrhotic patients, irrespective of the amount of protein and vitamins in the diet.

Complete bibliography on request. Meonine is supplied in 0.5 gram tablets. Wyeth, Philadelphia, Pa.

\*Beams, A. J., and Endicott, E. T., Histologic changes in the livers of patients with cirrhosis treated with methionine, *Gastroenterology* 9:718-735 (Dec.) 1947.



## MEONINE<sup>®</sup>

for liver damage

(dl-Methionine Wyeth)

*Wyeth*

<sup>®</sup>



A complete line for clinical laboratories devoted to all branches of chemistry, bacteriology, hematology, and parasitology. Tested and checked in our own clinical laboratories. Purity warranted. Our facilities assure prompt shipment of large or small orders. Inquiries invited.

## COMPLETE CATALOG

Reagents catalogued alphabetically—also according to subjects and techniques, plus medical reference guide. Catalog comprises full line blood testing sera including anti-Rh, anti-M and anti-N; also reagents for Wassermann, Kline, and Kalin tests. Write for your copy. FREE ON REQUEST.

and Medical  
Reference  
Guide



# GRADWOHL

LABORATORIES

R. B. H. Gradwohl, M. D., Director  
3514 Lucas Av. St. Louis, Mo.



... USED BY OVER  
**50,000**  
WEARERS

These thousands are proof of the satisfaction given by Hanger Artificial Limbs. Produced by long-established companies, the limb is a well-tried product, and the wearer is assured of proper service after purchase.

High quality materials, sturdy construction, and experienced workmanship make a dependable limb natural in appearance, graceful in action, and general in utility. Proper fit by an experienced Hanger man ensures the utmost comfort.

The reputation and prestige of Hanger Limbs have been established in daily use for over 85 years. Today more people wear Hanger Artificial Limbs than those of any other make.

# HANGER

ARTIFICIAL LIMBS

1912-14 Olive Street  
St. Louis 3, Missouri



## North Shore Health Resort

Winnetka, Illinois

*on the Shores of  
Lake Michigan*

A completely equipped sanitarium for the care of  
*nervous and mental disorders, alcoholism and drug addiction*  
offering all forms of treatment, including electric shock.

SAMUEL LIEBMAN, M.S., M.D.

225 Sheridan Road

Medical Director

Phone Winnetka 211

MORE AND MORE....



SAFE CONTRACEPTION

Physicians prescribing KOROMEX Jelly and KOROMEX Cream where pregnancy is diagnosed as inadvisable, are recognizing the safe, non-irritating, effective qualities that are supported by a long clinical record . . . fastest spermaticidal time\* . . . proper viscosity for cervical occlusion . . . the long time-period of stability . . . the effective use of spermaticidal agents in a non-irritating compound . . . the high ethical standards . . . pH consistent with the normal vagina.

ACTIVE INGREDIENTS: BORIC ACID 2.0%, OXYQUINOLIN BENZOATE 0.02% AND PHENYLMERCURIC ACETATE 0.02%, IN SUITABLE JELLY OR CREAM BASES.

\*MEASURABLE UNDER THE BROWN AND GAMBLE TECHNIQUE.



**KOROMEX**  
TRADE MARK REGISTERED

CHOICE OF PHYSICIANS™



HOLLAND-RANTOS COMPANY, INC., 145 HUDSON STREET, NEW YORK 13, N. Y.

MERLE L. YOUNGS • PRESIDENT



# 50 and 1

## Years Treating Alcohol And Drug Addiction

In 1897 Doctor B. B. Ralph developed methods of treating alcohol and narcotic addiction that, by the standards of the time, were conspicuous for success.

Twenty-five years ago experience had bettered the methods. Today with the advantages of collateral medicine, treatment is markedly further improved.

The Ralph Sanitarium provides personalized care in a quiet, homelike atmosphere. Dietetics, hydrotherapy and massage speed physical and emotional re-education. Cooperation with referring physicians. Write or phone.

*The*  
**RALPH**  
**SANITARIUM**  
*Established 1897*

Ralph Emerson Duncan, M.D.  
DIRECTOR



529 HIGHLAND AVE. KANSAS CITY 6, MO.  
Telephone Vctor 3624

# "SMOKE LESS...OR CHANGE TO PHILIP MORRIS"

*... if smokers are affected by the irritant  
properties of cigarette smoke*

Sometimes physicians may advise "Don't smoke at all." But even where that is indicated, how many patients will forego the pleasure of smoking?

For such patients, as for *all* smokers, the choice should be the least irritating of cigarettes. Many throat specialists suggest Philip Morris\* because they are convinced from published studies\*\*, as well as their own observations that Philip Morris alone, of all the leading cigarettes, is by far the least irritating to the sensitive tissues of the nose and throat.

Perhaps you too will find it advisable to suggest to your patients who smoke . . . "Change to Philip Morris."



Philip Morris & Co., Ltd., Inc., 119 Fifth Avenue, N. Y.

**IF YOU SMOKE A PIPE...** We suggest an unusually fine new blend — COUNTRY DOCTOR PIPE MIXTURE. Made by the same process as used in the manufacture of Philip Morris Cigarettes.

\*Completely documented evidence on file.

\*\*Reprints on Request:

Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154;  
Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60; Proc.  
Soc. Exp. Biol. and Med., 1934, 32-241; N. Y. State Journ.  
Med., Vol. 35, 6-1-25, No. 11, 590-592.



A complete line of laboratory  
controlled ethical pharmaceuticals.  
*Chemists to the Medical Profession for 44 years.*  
Mo. 1-49 *The Zemmer Company*  
Oakland Station • PITTSBURGH 13, PA.

**RADIUM** (including Radium Applicators) **FOR ALL MEDICAL PURPOSES**  
*Est. 1919*

**QUINCY X-RAY & RADIUM LABORATORIES**

(owned and directed by a Physician-Radiologist)

W. C. U. Bldg.

HAROLD SWANBERG, B.S., M.D., DIRECTOR

Quincy, Illinois

**HAMILTON-SCHMIDT SURGICAL CO.**

*St. Louis, Missouri*

[[ Surgical Instruments, Invalid and Sick Room Supplies ]]  
[[ Post-Operative Belts, Elastic Hosiery and Trusses Fitted ]]

REGISTERED NURSE IN ATTENDANCE

Central 1680

215 N. Tenth St.

*for Fifty Years*

**PROFESSIONAL PROTECTION  
EXCLUSIVELY**

**THE  
MEDICAL PROTECTIVE COMPANY  
FORT WAYNE, INDIANA**

ST. LOUIS Office: A. W. Breckenkamp, Representative, 623 Missouri Theatre Building, Telephone Newstead 0404



# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies  
Issued Monthly under direction of the Publication Committee

COPYRIGHTED, 1949, BY MISSOURI STATE MEDICAL ASSOCIATION. ALL RIGHTS RESERVED.

VOLUME 46

JANUARY, 1949

NUMBER 1

G. V. STRYKER, M.D., Editor  
HELEN PENN, Assistant Editor  
623 Missouri Bldg., St. Louis, Mo. Telephone, Newstead 0404-05

PUBLICATION COMMITTEE { G. V. STRYKER, M.D., Chairman  
V. T. WILLIAMS, M.D.  
H. E. PETERSEN, M.D.  
FRED R. FARTHING, M.D.

### CHILD HEALTH SERVICES IN MISSOURI

A REPORT OF THE AMERICAN ACADEMY OF PEDIATRICS' STUDY OF CHILD  
HEALTH SERVICES IN MISSOURI

#### INTRODUCTION

"THAT YOUR DAYS may be multiplied, and the days of your children, in the land. . . ." (Deuteronomy, 11:21.)

Of making many surveys there is indeed no end. Nor should there be! Not if one is to keep up intelligently with an everchanging world. The present Study of Child Health Services, at both national and state levels, is more a study than a survey—a fact which accounts for its four year period of gestation. As long ago as wartime September 1944 a committee representing the American Pediatric Society, the American

Academy of Pediatrics and the Maternal and Child Health Advisory Committee of the U. S. Children's Bureau, recognized that physicians (particularly pediatricians) should take the lead in planning the medical care of children. Wartime and postwar shortage of doctors; the Emergency Maternal and Infant Care program; various bills appearing in the Congress and the state legislatures; lack of funds for medical care from sources formerly bountiful, all make it crystal clear that those who are directly concerned with the public health must be both informed and alert.

The objective of the study is to discover the care which children are and are not receiving. The result which it is hoped will be achieved after its completion is "to make available to all mothers and children of the United States all essential preventive, diagnostic and curative medical services of high quality which, used in cooperation with other services for children, will make this country an ideal place for children to grow into responsible citizens." (Phraseology adopted at the St. Louis meeting of the Academy of Pediatrics, 1944.)

From the beginning it must be emphasized that the study is not a government enterprise. For reasons of efficiency, the central office has been in Washington, D. C. The National Director, Dr. John P. Hubbard, is a member of the Academy who practiced pediatrics until the war, in which he served with distinction. He has had and has merited the confidence and esteem of the membership throughout the study. Expert, fulltime medical and statistical personnel were "loaned" to serve under Dr. Hubbard by the two government agencies most concerned, the Children's Bureau (a staff headed by Dr. Katherine Bain) and the U. S. Public Health Service (a staff headed by Dr. Charles L. Williams, Jr., and latterly by Mrs. Maryland Y. Pennell.)

Naturally, progress was impeded by the war. But advisory committees were appointed and no less than eighteen detailed "schedules" were prepared by the central office, with the constant collaboration of the Study Committee under the chairmanship of Dr. Warren Sisson.

State Cochairmen: Park J. White, M.D., and Hugh L. Dwyer, M.D.; executive secretary, Elizabeth Bryan, M.D.; State Study Committee, P. G. Danis, M.D., L. M. Garner, M.D., A. F. Hartmann, M.D., Hugh McCulloch, M.D., B. S. Veeder, M.D.

Acknowledged with thanks: The valued assistance of (a) "the vast unnumbered throng" of cheerful collaborators; (b) the Division of Health of the State Department of Public Health and Welfare through its Director of Child Hygiene, Dr. L. M. Garner, and also its Director of Local Health and Hospital Administration, Dr. John W. Williams (the Health Division provided about half of the funds, plus much energy and skill, particularly on the part of Dr. Garner); (c) State Director John F. Putney of the National Foundation for Infantile Paralysis for securing practically all of the remainder of the funds through the St. Louis and St. Louis County Chapters, the Jackson, Greene, Marion, Ralls and the Callaway county chapters of the Foundation; (d) the Buchanan County Society for Crippled Children; (e) the Easton-Taylor Trust Co. of St. Louis and its president, Mr. William L. Gregory, for carrying the study account without charge and for many courtesies; (f) Mr. Donald E. Pratt and the Missouri Tuberculosis Association for special help to the executive secretary; (g) Dr. Alexis F. Hartmann and the St. Louis Children's Hospital for major and minor contributions, intangible and tangible, including office space; (h) the Council of the Missouri State Medical Association, Dr. J. W. Thompson, Chairman, and the Committee on Publication, Dr. G. V. Stryker, Editor and Chairman, for their courtesy and cooperation in publishing the report; Miss Helen Penn and Mr. T. R. O'Brien of the Association's office for their helpfulness; (i) Mr. Ray Kneiff who conducted the survey of the Catholic Hospital Association; (j) the St. Louis Hospital Council; (k) the Missouri State Dental Association and its president, Dr. John M. Clayton; (l) the Mound City Medical Forum and its president, Dr. Howard P. Venable; (m) Miss Lorraine Eggers, for her expert work with the charts and graphs. Finally, the patience, efficiency and ever ready cooperativeness of the Central Office of the Study in Washington must receive special mention. Drs. John Hubbard and Katherine Bain have come to the rescue with help and counsel on numerous occasions.

It was clear that this tremendous fact finding job would have to be carried out by the various state organizations under the leadership of the state chairmen of the Academy. The undertaking has turned out to be the most comprehensive ever completed by any group of physicians. It is the only comprehensive health survey ever done on a state-by-state basis for the country as a whole.

Sources of information have been: (a) physicians and dentists; (b) voluntary and official community health agencies, and (c) all hospitals admitting children or maternity cases.

The National Study Committee wisely foresaw the need of a "pilot state" in which the study could be launched quickly, with an efficient personnel, with the close cooperation of the central office—a state whose methods could serve (as they have served) as a guide to the other states. The choice of North Carolina as the pilot state has proved a happy one.

#### MISSOURI CHRONICLE

The cochairmen Drs. Park J. White, St. Louis, and Hugh L. Dwyer, Kansas City, and Dr. L. M. Garner of the Division of Child Hygiene, Health Department, Jefferson City, agreed that from all points of view, St. Louis would best serve as headquarters for the study.

After various committee meetings and much correspondence, Dr. Elizabeth Bryan, executive secretary, (herself a pediatrician) opened the study office in Children's Hospital, St. Louis, March 15, 1946, with Miss Mary Jane Mattox as her secretary, released by Dr. Alexis Hartmann for the work.

On March 24, 1946, Dr. Dwyer presented the scope and purpose of the study to the House of Delegates of the Missouri State Medical Association and received their promise of full cooperation. Unfortunately, the Association's treasury was in no condition to give any financial assistance; but its promise has been kept. Only through the work of the general membership could the study have been made.

As in the country as a whole, the child population is cared for mostly, not by pediatricians, but by general practitioners. It should be a source of satisfaction to the Association that 63 per cent of the harassed practicing physicians took the trouble to fill out their detailed schedules. And it was they who helped secure information on child care from the hospitals in which they work. Some of them took the time to write in notes and comments on their local setups, which were both valuable and interesting. Practitioners, too, who own and operate certain small hospitals, gave willing help with their hospital schedules. The Missouri State Medical Association, both in gathering and later in publishing the information, fulfilled expectations.

Missouri has no state pediatric society. Of Missouri's seventy-five pediatricians, forty-three practice in the greater metropolitan area of St. Louis, twenty-five in the lesser metropolitan areas of Kansas City, St. Joseph and Springfield, all near the western border of the state; seven in the isolated semirural areas. This situation conspires against, in fact precludes, a single organization of pediatricians.

Late in April 1946 a meeting of the advisory committee of forty-seven representatives of agencies concerned with child welfare was held and the plan and scope of the study was presented and discussed. The same procedure was carried out with the other medical groups, the Mound City Medical Forum and the

Missouri State Dental Association. All were both interested and cooperative.

Articles, letters and editorials heralding and explaining the schedules presently issued, were then resorted to. Following this, each pediatrician was asked to fill out his own schedule and to take charge of obtaining the data from hospitals in his vicinity; to help local health officers with the schedules of community health services, and to approach general practitioners and specialists of his acquaintance, giving encouragement and help with their schedules.

The catalyst, the gadfly, was, of course, the executive secretary, who journeyed throughout the state, visiting first the pediatricians, then certain of those in general practice. Later in the summer, a field secretary was secured to help with the hospital schedules. In this capacity, Mrs. J. L. Bryan rendered service of the greatest value.

It should be emphasized that the data were obtained in the summer of 1946. Records of physicians' visits were obtained for a single day, one seventh of the physicians reporting for each of the days of the week. Correction was made for the season in which the study was conducted. Adjustment was made for physicians not reporting, on the basis of a special study in four states. Thus, unless otherwise indicated, the figures represent services for all practitioners in the state or specified area. Each pediatrician reported his activities for a given period of twenty-eight days. Schedules for community health services and hospitals covered one year.

Because of the absence of any adequate data on population for the year of the study, special estimates of child<sup>1</sup> population as of July 1, 1945, were made for each county.<sup>2</sup>

The majority of the data obtained, especially that which can be expressed in terms of rates per 1,000 children, are measures of quantity rather than quality of service. Deficiencies in amount of service are likely to be associated with inferior quality of care; so that the comparisons in this report tend to underestimate the real disparities.

#### COMPARISONS WITH OTHER STATES

A valuable portion of the report should be that in which medical and dental statistics for Missouri are compared with those for the country as a whole. For the purposes of the Missouri study, the state committee decided that, wherever possible, it should draw comparisons with neighboring and the fairly comparable states of Illinois, Iowa, Nebraska and Kansas.

#### COMPARISONS WITHIN MISSOURI

Counties have been grouped to bring out contrasts between densely populated urban centers and isolated rural counties (fig. 1).

The usual classification of urban and rural is not sat-

1. In this report "children," unless otherwise qualified, refers to persons less than 15 years of age, including newly born and premature infants.

2. Population less than 5 years of age was estimated on the basis of the number of births for each of the five calendar years 1940 through 1944. Survival rates for each year of age were applied to the number of births occurring in each of the years, and adjustment was made for under registration of births. The number of children aged 5 to 14 years was estimated for each county on the basis of changes in school enrollment. The ratio of elementary public day school enrollment for 1945 to that for 1940 was used to project to 1945 the 1940 census population in the age group 5 to 14 for each county. In both cases the figures were adjusted to total to the estimated population of the entire United States for the specific age group for July 1, 1945.



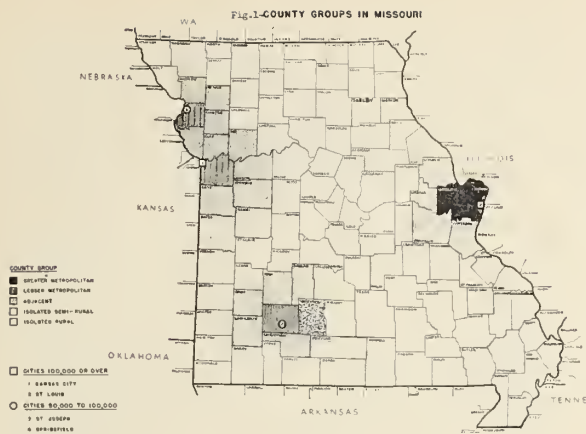


Fig. 1. County Groups in Missouri.

isfactory, since people cross county lines to obtain medical care in centers near by. Counties have therefore been grouped together on the basis of two fundamental characteristics: (a) population density, and (b) proximity to densely populated areas. In this way, separate consideration is given to counties which, although they themselves may be populated sparsely, are, nevertheless, relatively close to metropolitan counties and the medical facilities there available. Under this classification, a greater metropolitan county is one in which there is located any part of metropolitan districts of 1,000,000 or more inhabitants; in Missouri this is in and around the City of St. Louis. Lesser metropolitan counties are those which include the metropolitan districts of cities of from fifty thousand to one million population. Counties which are geographically contiguous to any of the metropolitan counties are classified as adjacent. Counties that do not touch any part of a metropolitan county have been termed isolated, and subdivided into those with an incorporated place of 2,500 or more population as semirural and those without such a place as rural.<sup>3</sup>

Pediatric training of all physicians obviously is so bound up with quality of child care that a nation wide study of pediatric education had to be made a part of the investigation. This was delegated to a separate committee whose representatives visited all the medical schools and hospitals approved for pediatric residencies. Their findings belong more properly in the national than in a state report.

## CHAPTER I—THE ECONOMIC AND HEALTH SETTING OF THE CHILD

If this study—at both state and national levels—shows anything, it shows the truth of two aphorisms: (1) "To him that hath shall be given" and (2) "Public health is purchasable." For it is economic status which determines quantity, quality and availability of all health services.

Herein lies the stimulus for Missouri. Statistically, from the point of view of child health at least, Missouri is about "in the middle of the picture" even as it is about in the middle of these United

States. But Missouri is not so poor but that it could do far better by the health of its children.

Based on statistics copyrighted by *Sales Management, Inc.*,<sup>4</sup> for the years 1944-1946, the average per capita buying income throughout the United States was \$1,141. Connecticut had the highest rank with an average income of \$1,579. The income per capita of the lowest state was \$559. The income of \$1,026 per person in Missouri is exceeded by twenty-seven states (fig. 2).

Among the five comparable neighboring states, Missouri ranks fifth in per capita income:

Illinois	\$1,356
Kansas	1,102
Nebraska	1,067
Iowa	1,060
Missouri	1,026

### CHILD POPULATION

In Missouri (statistics for 1940) children comprised 27.7 per cent of the population. This was the twenty-seventh highest percentage in the country, and fourth from the highest in the group of selected neighboring states.

Nebraska	25.2 per cent
Iowa	24.6 per cent
Kansas	24.4 per cent
Missouri	23.4 per cent
Illinois	21.6 per cent

Missouri's total child population was 964,021.

Forty-four per cent (426,711) of the children were in metropolitan counties, 9 per cent (85,564) in adjacent counties, 31 per cent (295,709) in isolated semirural counties, and 16 per cent (156,037) in isolated rural counties.

Although statistics for Missouri's Negro population as a whole cannot be obtained, the following estimate of child population (as of July 1, 1945) has been made for Missouri's nonwhite children (under 15 years of age): number in whole state, 66,552; of these, 67.6 per cent (45,096) were in metropolitan counties, 2.5 per cent (1,693) in adjacent, 22.8 per cent (15,200) in isolated semirural, and 6.8 per cent (4,563) in isolated rural counties.

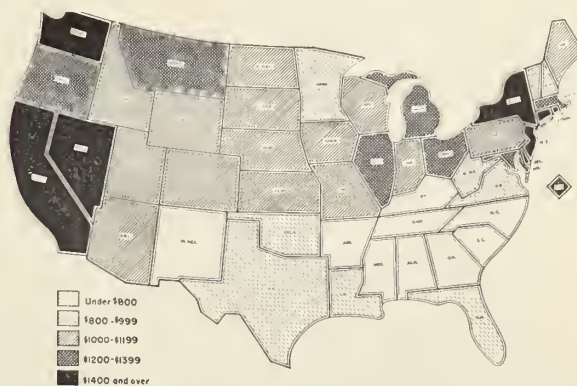


Fig. 2. Per capita effective buying power by state.

3. For a more detailed description of the classification by county group, see Hubbard, John P.; Pennell, Maryland Y., and Britten, Rollo H.; *Health Services for the Rural Child—Availability of Hospitals, Physicians and Dentists in Service Areas*, J. A. M. A. 137:337-343 (May 22) 1948.

4. *Sales Management* 5:4 (May 15) 1945, and corresponding issues 1946 and 1947.



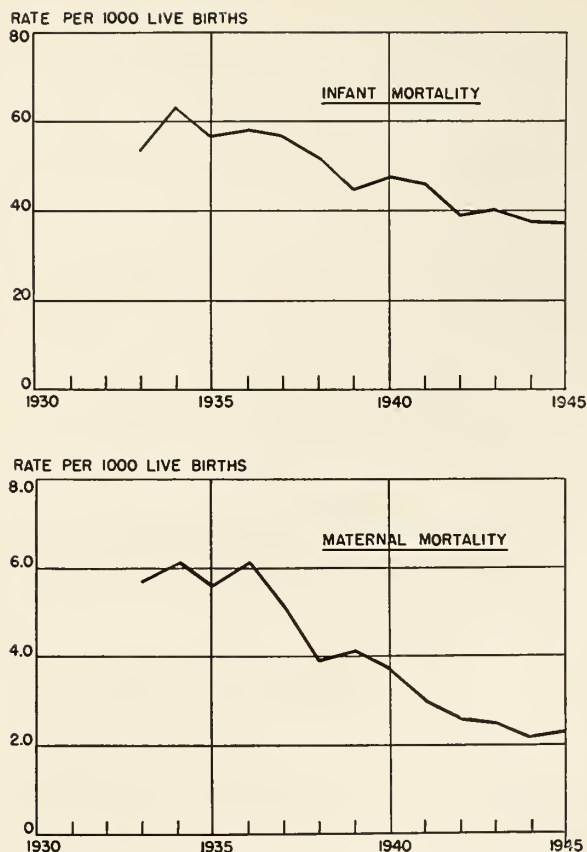


Fig. 3. Trend of infant and maternal mortality in Missouri, 1933 to 1945.

#### DEATH RATE

Missouri's age adjusted death rate during 1940<sup>5</sup> was seventeenth highest of all the forty-eight states, and the fourth highest among the selected neighboring states.

Nebraska	8.5 per 1,000 population
Iowa	8.6 per 1,000 population
Kansas	8.7 per 1,000 population
Missouri	10.1 per 1,000 population
Illinois	10.6 per 1,000 population

#### INFANT MORTALITY

From 1941 to 1945, forty of every one thousand children born alive in Missouri died during the first year of life.<sup>6</sup> The infant mortality rate was twenty-second highest among all the states, and highest among the five selected neighboring states.

Illinois	32.9 per 1,000 live births
Nebraska	33.0 per 1,000 live births
Iowa	33.5 per 1,000 live births
Kansas	34.5 per 1,000 live births
Missouri	40.1 per 1,000 live births

It will be of interest to cite figures recently re-

5. The rates were adjusted to the age composition of the entire country. 1940 data are used since that is the last year for which population data by age are available. National Office of Vital Statistics, U. S. Public Health Service, Special Reports, Selected Studies 23 (June 26) 1945.

6. Data from "Reference Tables on Infants and Maternal Mortality, United States, 1941-1945," Division of Statistical Research, U. S. Children's Bureau, Social Security Administration, Federal Security Agency (February 16) 1948. Tabulations derived from data furnished by the National Office of Vital Statistics.

leased by the National Office of Vital Statistics of the U. S. Public Health Service which shows that the steady decline of the last thirty years in the infant mortality rate is continuing<sup>7</sup> (fig. 3). The rate for 1946 for the United States as a whole was 33.8. In 1941 the rate was 45.3, so that for the nation there was a 25 per cent decrease for the five years ending in 1946.

Of the 111,063 infant deaths which occurred in 1946, almost three fourths took place within the first month. Almost exactly a third (33.9 per cent) occurred in the first twenty-four hours after birth. Premature birth remained the leading cause of death, accounting for 12.1 of the 33.8 rate.<sup>7</sup>

In the latest report of the Division of Health of Missouri it states: "A record-breaking 82,901 live births were recorded in Missouri in 1946. This gave an excess of births over deaths of 40,261, the largest ever recorded.

"The 2,659 resident infant deaths in Missouri during 1946 gave a rate of 33.0 per 1,000 live births. . . . the lowest infant death rate ever registered in Missouri. . . . Infant and maternal death rates always tend to decrease when there is a large increase in the birth rate."<sup>8</sup>

Nonwhite infant mortality in Missouri in 1945 was 83 per cent higher than the rate for white infants (64 against 35 per 1,000 live births).<sup>9</sup>

These figures are rendered all the more striking when one compares them with those for nonwhite infant mortality in North Carolina, which was 48 per cent higher than the rate in white infants (55.5 against 37.5 per 1,000 live births). Accurate statistical bases for Missouri's bad showing are of course largely lacking. Discussion of possible causes should come later in the report.

It is cheering to note that in Missouri in 1946<sup>8</sup> the white infant mortality rate decreased 11.4 per cent and the Negro 15.2 per cent.

#### MATERNAL MORTALITY

During the period 1941-1945, inclusive, 2.5 mothers died for every 1,000 babies born alive. Missouri's rate was seventeenth highest in the country and highest among the five selected neighboring states.

Nebraska	1.80
Iowa	1.96
Illinois	2.02
Kansas	2.23
Missouri	2.53

The maternal mortality rate in 1944 was 5.83 per 1,000 live births; in 1945 it was 2.28 per 1,000 live births (fig. 3).

In 1945 the nonwhite maternal mortality rate was 4.8 per 1,000 live births; the white maternal mortality rate for that year was 2.1 per 1,000 live births.

#### HOSPITAL BIRTHS

During 1945, 73.8 per cent of live births occurred

7. Editors Column, Veeder, B. S.: J. Pediat, 32 (June) 1948.

8. Report of the Division of Health, Missouri, R. M. James, Director, for January 1, 1946, to June 30, 1947, pp. 212 and 214.

9. National Office of Vital Statistics, U. S. Public Health Service.

in hospitals, placing the state thirty-fifth from the highest among the forty-eight states and fifth of the five selected states.

	(1945)	(1946)
Illinois .....	91.9%	93.2%
Iowa .....	88.8%	92.2%
Nebraska .....	87.7%	90.9%
Kansas .....	87.6%	90.3%
Missouri .....	73.8%	78.2%

Per cent born in hospitals in Missouri, 1945

Metropolitan and adjacent counties.. 88.2 per cent

Isolated counties ..... 53.1 per cent

Recent increase in per cent live births in hospitals in Missouri

	1935	1939	1941	1945
White .....	31.4	43.7	52.6	74.3
Nonwhite .....	49.4	58.8	61.0	68.2

The National Office of Vital Statistics reports that for the nation as a whole (all population groups) during the same decade, the average percentage of live births in hospitals increased from 36.9 per cent to 78.8 per cent.

The striking thing about the figures for Missouri is that although the increase in white births in hospitals for the ten year period was about twice that in nonwhite, the percentage of nonwhite hospital deliveries was remarkably high throughout. It exceeded the white until 1945. These data are in marked contrast with North Carolina's—bearing in mind, of course, that the latter's Negro population is proportionally far higher than Missouri's. To quote North Carolina's report, "Almost three fourths of the white babies were born in hospitals, but only one fourth of the nonwhite."

It is interesting that during the decade (1935-1945) the total population of Missouri decreased from 3,710,900 to 3,556,693. (In 1946, however, it rose to 3,780,471.)<sup>10</sup> Unfortunately, as in many other states, these figures for population are not broken down according to race.

In a study grouping miscellaneous health and sanitation factors, Missouri ranks thirtieth among the forty-eight states, and fifth among the five selected neighboring states.<sup>11</sup>

## CHAPTER II—TOTAL VOLUME OF CHILD HEALTH SERVICES

### A. MEDICAL CARE

To the general question, "How much care should children have?," doubtless the majority would reply "the most and the best possible." But the more thoughtful would counter with "Who will furnish the care? Physicians? Clinics? Hospitals? And to what children? To premature infants? To sick or well, to rich or poor?" At present it must be admitted that there are no satisfactory standards by which to determine adequacy of medical care of infants and children.

But it is meet, right and a bounden duty to set forth and to appraise the amount of care which they now are receiving.

A three-dimensional picture of the total volume

10. Report of the Division of Health, Missouri, R. M. James, Director, for January 1, 1946, to June 30, 1947, p. 218.

11. Hirschfeld, G., and Strow, C. W.: Comparative Health Factors among the States, *Am. Sociological Rev.* 11:42-52 (February) 1946.

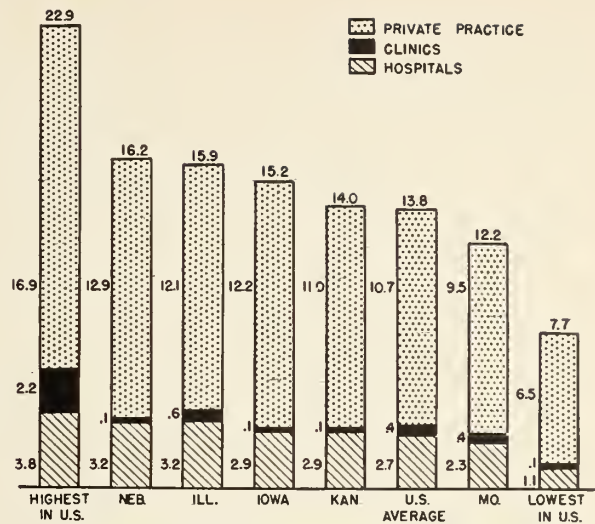


Fig. 4. Total volume of medical care for children on one day per 1,000 children in five selected states, highest, average and lowest of all states.

of medical care rendered to children on one day has been obtained by adding the care (in terms of visits or hospital days<sup>12</sup>) rendered to children (a) in private practice (office and home); (b) in clinics and conferences;<sup>13</sup> and (c) in hospitals.<sup>14</sup> This summation represents the total number of children under medical care on one day and, when related to the child population, provides a useful index of the total volume of medical care.

In certain areas children receive the greatest amount of care; but this does not necessarily mean that that care is sufficient nor of high quality. "Let us examine the facts."

Children in Missouri receive on the average 25 per cent less medical care (as previously defined) than those in the highest of all the states, and 25 per cent less medical care than those in the highest of the five selected states.

Nebraska .....	16.2
Illinois .....	15.9
Iowa .....	15.2
Kansas .....	14.0
Missouri .....	12.2

Persons living in counties which have been classified as "adjacent" to metropolitan counties often obtain their hospital care in the latter. Hence "metropolitan and adjacent" counties have been combined in tabulating rates for total volume of medical care by county group. Isolated semirural and rural counties have been used for comparisons of total volume of medical care.

Children in the isolated counties of Missouri received 38 per cent less medical service than those

12. Since, for this purpose, equal weight is given to a physician's visit, a clinic visit, a day of hospital care, it may be felt that the importance of hospital care has been underestimated in the figures for the total volume.

13. Outpatient departments, medical well child conferences, mental hygiene clinics and community health services for crippled children.

14. Days of care in institutions for the feeble-minded are excluded.



in the metropolitan and adjacent counties,<sup>15</sup> as shown in the following table:

	Number per 1,000 Children	per 1,000 Children	per Day	
	Total Children Under Medical Care	Visited by Physicians (Office and Home)	Visiting Clinics (Outpatient and Well Child)	In Hospitals (General)
Metropolitan and adjacent counties	14.6	10.9	0.62	3.0
Isolated counties	9.0	7.9	0.05	1.1

By way of comparison, children in the isolated counties of North Carolina received only 20 per cent less medical service than those in the metropolitan and adjacent counties. Missouri's "38 per cent less" is accounted for readily when one notes (a) the much higher percentage of all kinds of care in metropolitan and adjacent counties; (b) the exceedingly low rate for children "visiting clinics" in isolated counties in Missouri.

It is important to consider what part of the total volume of medical care received by Missouri children is for health supervision. Such supervision is comprised of two elements: (a) visits to child health conferences, and (b) visits to physicians' offices.<sup>16</sup> Of the total number of children under medical care in Missouri (exclusive of the newly born) about one fifth (21.9 per cent) are under care for health supervision.

#### B. DENTAL CARE

On an average day in Missouri (1946) 2.9 children per 1,000 children were under dental care.

*Comparison With Other States.*—Twenty-one of the forty-eight states had more children under dental care per day per 1,000 children than Missouri. The highest was Massachusetts with 7.2, the lowest New Mexico with 0.9. The average for the forty-eight states was 3.3 children per 1,000 per day.

Five Selected Neighboring States	
Illinois	5.3
Nebraska	3.9
Iowa	3.6
Kansas	3.0
Missouri	2.9

Dental clinic service in Missouri accounted for 3.8 per cent of the total volume of dental care. Missouri's total one day volume of dental care was 2.9 per 1,000 children, of which 0.11 children per 1,000 were seen in dental clinics. For the forty-eight states, the figures were 3.3 and 0.13 respectively.

In the metropolitan and adjacent counties of Missouri, the number of children under dental care on one day was 3.8 per 1,000 children, as against 1.9 in isolated counties. Dental clinic service was given 0.19 children per 1,000 in metropolitan and adjacent counties as against 0.02 children per 1,000 in isolated counties.

15. In comparison by county group, data for special hospitals and for mental hygiene and physically handicapped services are excluded.

16. Hospital care, a part of total volume, was excluded from well child care.

### CHAPTER III—HEALTH SUPERVISION

No one any longer denies the importance of "well baby work" in any program of pediatric care, whether institutional or private. Intelligent parents, pediatricians, general practitioners and social workers recognize the importance of continuing observation of the processes of growth and development.

In Missouri (1946) of the private physicians' visits for health supervision of children, 63 per cent were made by general practitioners, 27 per cent by pediatricians and 10 per cent by other specialists.

Of the general practitioners' visits to children, 23 per cent were for health supervision (including that of newborn infants). For the pediatricians, this proportion was 58 per cent.

Comparison With Other States		
Per Cent of Visits to Children Which Are for Health Supervision		
	General Practitioners	Pediatricians
Average of 48 states	28.2	55.8
Five Selected Neighboring States		
Iowa	30.3	42.2
Nebraska	30.1	52.1
Kansas	28.0	56.3
Illinois	27.8	56.5
Missouri	23.4	57.5

In considering the number of children under health supervision on one day in Missouri, one must take into account the health conferences conducted by public and private agencies, as well as the observation given by physicians in their offices. Children attending well child conferences usually range in age from 1 month to 6 years, so the following comparisons are limited to these ages. Because of the age group used in census data, the estimated population under 5 years of age is used in calculating the rates.

The number of preschool children under health supervision on one day in Missouri (1946) was about 4.4 per 1,000 children under 5 years of age. Twenty-eight states had rates higher than that of Missouri.

Comparison With Other States			
	Total	Private Practice	Well Child Conferences
Highest—New York	10.7	9.5	1.2
Lowest—Mississippi	1.9	1.8	0.1
Average—48 states	5.5	5.0	0.5
Five Selected Neighboring States			
Illinois	6.7	5.8	0.9
Iowa	6.0	5.9	0.1
Nebraska	5.8	5.7	0.1
Kansas	4.5	4.4	0.1
Missouri	4.4	4.1	0.3

With regard to county groups in Missouri (1946), the differences in amount of health supervision is indicated by the following figures:

	Number of Children per 1,000 Under 5 Years Under Health Supervision in One Day
Greater and lesser metropolitan counties	7.0
Adjacent counties	2.5
Isolated semirural	2.5
Isolated rural	2.2



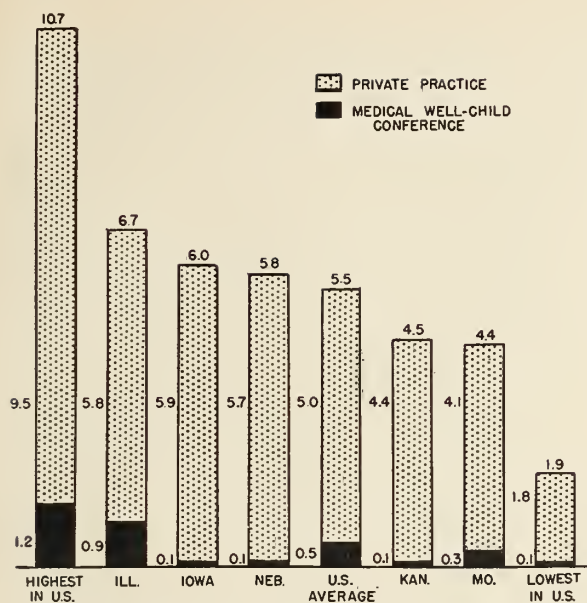


Fig. 5. Children receiving health supervision on one day per 1,000 children in Missouri—comparison with five selected states, highest, average and lowest of all states.

Only one third as much care was given to children in adjacent and rural counties as in the metropolitan ones.

## CHAPTER IV—PRIVATE PRACTICE

### A. PHYSICIANS

In July 1946 there were 3,073 physicians in private practice in Missouri.

#### Age, Sex, Race of Physicians in Missouri

Age:		
Age Groups	Number	Per Cent of Total Reporting
Under 35	249	8
35-44	692	23
45-54	658	21
55-64	696	23
65 or over	768	25
Not reported	10	
Summary		
Under 45	941	31
45-64	1,354	44
65 or over	768	25
Sex:		
Male	2,993	97
Female	80	3.6
Race:		
White	2,948	96
Nonwhite	125	4
Sex and Race:		
Male, white	2,869	
Male, nonwhite	124	
Female, white	79	
Female, nonwhite	1	

Rather than present detailed tables of statistics on age, race and sex of physicians in private practice, by county groups, they are summarized as follow: Of 1,847 general practitioners in the whole state, 1,137 practiced in metropolitan and adjacent counties, 710 in isolated semirural and rural counties. Of the latter number, 444 (nearly two thirds) were more than 55 years old. Only 7 of the state's 75 pediatricians practiced outside the metropolitan areas. There is no need to "break down" the figures for the 1,151 other specialists according to age as

their tendency to practice in urban areas is similarly great.

**Number, Type and Training of Physicians.**—Missouri's 3,073 physicians in private practice in July 1946 gave a ratio of 314 children per physician. Only eighteen states had a ratio lower than that of Missouri, the lowest being that of New York: 143 children per physician. North Carolina had the highest—764 children per physician. The average for all the forty-eight states was 308 children per physician.

Two of the five selected neighboring states had ratios lower than that of Missouri:

Illinois	219 children per physician
Nebraska	273 children per physician
Missouri	314 children per physician
Iowa	327 children per physician
Kansas	411 children per physician

For Missouri, the number of children per physician in each of the five county groups was as follows:

	Number of Children per Physician	Actual Number of Physicians
Greater metropolitan	193	1,367
Lesser metropolitan	223	727
Adjacent	460	186
Isolated semirural	506	584
Isolated rural	747	209

Specialists, of course, serve children beyond county limits.

**Pediatricians.**—In 1947 there were in Missouri seventy-five physicians who reported that they limited their practices to children, and who accordingly were classified as pediatricians. This gave a ratio of 12,820 children per pediatrician.

Of the forty-eight states, the lowest ratio of children to pediatrician was that of New York—4,182; the highest was that of Arkansas, 73,005; the average 10,299.

Of the five selected neighboring states, the ratios were as follow:

Illinois	7,571 children per pediatrician
Missouri	12,854 children per pediatrician
Nebraska	16,905 children per pediatrician
Kansas	24,429 children per pediatrician
Iowa	29,406 children per pediatrician

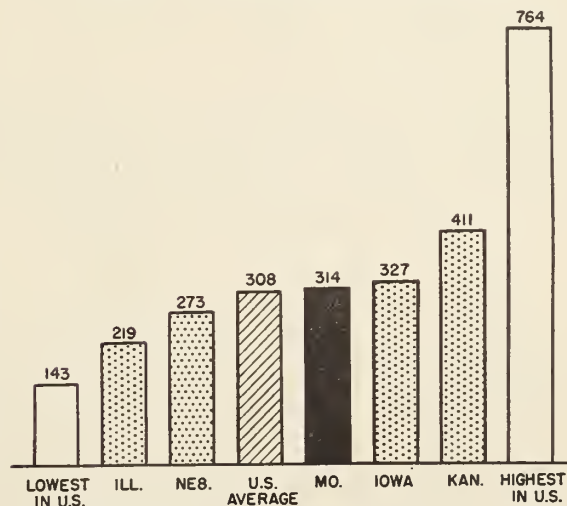


Fig. 6. Number of children per physician in five selected states, highest, average and lowest of all states.

All of the seventy-five pediatricians had their offices in cities of ten thousand or more population; 43 in greater metropolitan areas, 25 in lesser metropolitan, 7 in isolated semirural counties. Forty-two of them (1946) have been certified by the American Board of Pediatrics.

*Other Specialists.*—There were 1,151 specialists other than pediatricians practicing in Missouri in 1946. The number by type and certification follows:

	Total Number	Number Certified by American Specialty Boards
Internal medicine and allied specialties	308	96
Allergy	4	2
Psychiatry and neurology	51	19
Surgery except orthopedic	329	82
Orthopedic surgery	35	18
Obstetrics and gynecology	121	49
Ophthalmology and otolaryngology	250	141
Radiology and anesthesiology	53	35

*Training.*—Of 895 general practitioners reporting hospital training, 23 per cent reported that they had received none; 3 per cent that they had received less than one year; 36 per cent that they had received from one to two years; 38 per cent that they had received two or more years.

With regard to hospital training specifically in pediatrics, 891 reported; and of these, 58 per cent had received none or less than one month's hospital training in pediatrics. In fairness it should be noted that more than 69 per cent (as previously reported) of the practicing physicians were more than 55 years old. Thus early training was less available for them.

#### Physicians' Services

In Chapter II, dealing with the total volume of medical care, the counties were combined into two groups. For comparisons of private practice, the five county groups may be considered separately.

	Physicians' Visits per 1,000 Chil- dren, One Day (Office, Home and Hospital)	Percentage of Child Population in Each County Group
Whole State	11.8	100
Greater metropolitan	14.7	27
Lesser metropolitan	14.0	17
Adjacent	11.3	9
Isolated semirural	11.0	31
Isolated rural	6.6	16

The amount of care received by children living in the isolated rural counties of Missouri is not even half that received in the metropolitan areas.

#### Proportion of Care Rendered by General Practitioners and Specialists

##### Per Cent of Visits by Type of Practitioner

	General Practitioner	Pediatrician	Other Specialist
Whole state	73	13	14
Greater metropolitan	58	21	21
Lesser metropolitan	53	25	22
Adjacent	97	0	3
Isolated semirural	89	4	7
Isolated rural	99	0	1

Pediatricians and other specialists serve children in other than metropolitan counties.

From this table one should single out for emphasis the fact that, throughout the state of Mis-

souri, general practitioners provided 73 per cent of the visits to children, pediatricians 13 per cent, other specialists 14 per cent—with children in adjacent, isolated semirural and isolated rural counties receiving in all only 4 per cent of their care from pediatricians.

*Number of Visits per Day.*—During the months covered by the study, general practitioners reported seeing an average of 4.5 child and 12.7 adult private patients per day. Seven per cent reported an average of fifty visits or more to patients of all ages. (Sundays, holidays and days off were included in making this average.)

Number of Visits One Day	Per Cent of Persons of All Ages Per Cent	Per Cent of General Practitioners Re- porting Specified Number of Visits to Children Under 15 Years of Age Per Cent
None	25	33
1- 9	19	50
10-19	19	14
20-29	15	2
30-39	10	1
40-49	6	0
50-59	3	0
60-99	3	0
	100	100

The average number of pediatricians' visits per day, based on data for four consecutive weeks, was twenty. (This figure may be compared with North Carolina's, which was twenty-seven.)

Number of Visits One Day	Pediatricians Reporting Specified Number of Visits
1- 9	11
10-19	27
20-29	16
30-39	2
40-49	4
50 or more	2
	62

*Location of Visits.*—The proportion of office, home and hospital visits is as follows:

##### Per Cent of Children's Visits by Location

	General Practitioner	Pediatrician	Other Specialist
Office	67	68	52
Home	17	15	4
Hospital	16	17	44

#### B. DENTISTS

*Number, Type and Training.*—In July 1946 there were 2,043 dentists in private practice in Missouri. Of these, 110 reported that they limited their practices to the following specialties:

Pedodontia	8
Orthodontia	40
Oral surgery	35
Periodontia	6
Prosthetics	21

For the state of Missouri as a whole, there was a ratio of 472 children per dentist. In all forty-eight states, the lowest ratio was that of New York, with 273 children per dentist. Of the 46 states reporting, twelve had ratios lower than that of Missouri. The highest ratio was that of South Carolina with 2,155 children per dentist. The average for 46 states was 548 children per dentist.

Three of the five selected neighboring states had ratios lower than that of Missouri:



Illinois	338	children	per	dentist
Nebraska	417	children	per	dentist
Iowa	442	children	per	dentist
Missouri	472	children	per	dentist
Kansas	591	children	per	dentist

For the various county groups in Missouri, the number of children per dentist was about what might have been expected:

	Number of Children per Dentist
Greater metropolitan	302
Lesser metropolitan	323
Adjacent	701
Isolated semirural	745
Isolated rural	1,069

There were two counties in which there was no dentist in private practice. Figure 8 shows the position of the individual counties with respect to the relative number of dentists.

*Age, Sex, Race and Training.*—The following data are given for the 2,043 dentists in private practice in Missouri in July 1946:

Age Groups	Number of Dentists	Per Cent of Those Reporting
Under 35	310	16
35-44	488	25
45-54	539	27
55-64	404	21
65 or over	215	11
Not reported	87	
Summary		
Under 45	798	41
45-65	943	48
65 or over	215	11
Sex		
Males	2,027	
Females	16	
Race		
White	1,990	
Nonwhite	53	
Sex and Race		
Male white	1,975	
Male nonwhite	52	
Female white	15	
Female nonwhite	1	

*Training.*—Of 735 dental general practitioners who reported, only thirty-three had received any postgraduate training in pedodontics.

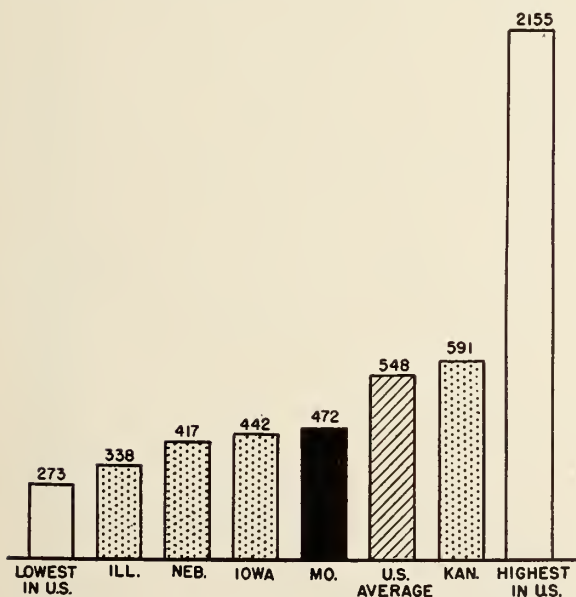


Fig. 7. Number of children per dentist in five selected states, highest, lowest and average of United States.

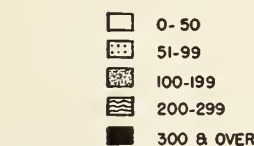
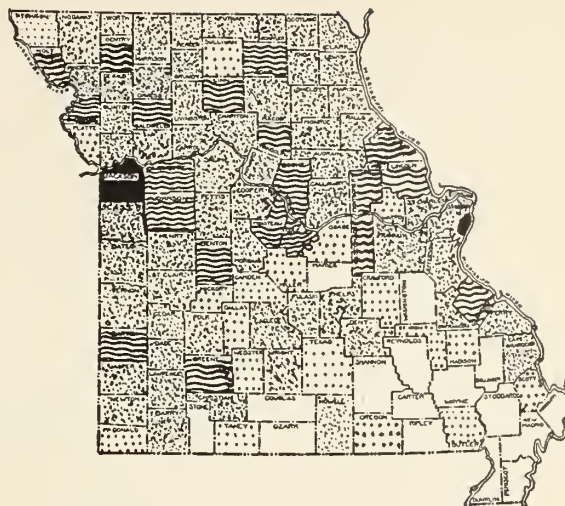


Fig. 8. Rate of dentists per 100,000 children for each county in Missouri.

*Office Assistants.*—Of 1,117 dentists who reported the number of their office assistants, 393 had none, 577 had one each, 147 had two or more each. Of 1,032 dentists who reported the number of their dental hygienists, forty-five reported that they had dental hygienists in their offices.

#### Dentists' Services

The rate of visits for dental care on one day has been given in Chapter II in comparison with the other selected states and for two broad county groups. The number of visits per 1,000 children on one day for each of the county groups is:

Greater metropolitan	4.2
Lesser metropolitan	3.4
Adjacent	2.0
Isolated semirural	2.0
Isolated rural	1.7

On an average day, each dentist saw about seven (7.1) patients, of whom slightly less than one fourth were children (1.5 children). (Based on one day records by 1,262 dentists. Not adjusted for season nor for the nonreporting group.)

The total of services per day by 920 dentists is:

	Children Under 6 Yrs.	Children 6-14 Yrs.
Extractions	108	313
Fillings	315	876

Of 904 dentists reporting whether they spent any time in dental activities other than private practice during a four week period, 16 reported that they performed preschool or school dental services, averaging about ten hours per week for those participating. Sixty-two reported participating in other dental activities such as teaching, outpatient clinical and institutional work. The amount of time so



spent averaged 6.7 hours per week for those participating.

## CHAPTER V—COMMUNITY HEALTH SERVICES

Those who started practice about thirty years ago may recall that at that time such enterprises on behalf of child health as medical well child conferences and school health services were looked upon with varying degrees of suspicion by certain of both physicians and laity. As the need of better distribution of measures for promotion of the health of children has become increasingly apparent, especially among those in the lower income brackets, and as the preventability of certain diseases, both infectious and nutritional, has been demonstrated strikingly, physicians, laymen, legislators and welfare workers have come to realize that the health of children is the concern of everyone.

The shortage of doctors, particularly during the war, has made it painfully clear that both the preventive and curative procedures which research has given must be made available to the poor as well as to the rich, to the children of countryfolk as well as to the children of the market place, to the children of the colored races as well as to the children of the white. In the interest of efficiency alone, then, the development of the following seven types of child health services has been as natural and desirable as it has been inadequate.

They are: (a) well child conferences, (b) mental hygiene services, (c) services for the physically handicapped, (d) public health nursing services, (e) school health services, (f) communicable disease control, (g) dental services.

Although this list is by no means complete, nevertheless, a careful examination into the extent to which Missouri provides such services should reveal the state's interest in and activity for the health of her children.

Naturally, physicians and dentists must do or

supervise the greater part of the actual work, even though the administering authority may be a public or private agency.

The following table shows the amount of time per month spent by general practitioners and by pediatricians in Missouri in child health conferences, school health services and other medical activities aside from private practice.

	Child Health Conferences	School Health Services	Other Medical Activities
Hours per general practitioner: <sup>a</sup>			
Participating .....	9.1	18.5	27.8
All reporting .....	.6	2.5	2.9
Hours per pediatrician: <sup>b</sup>			
Participating .....	14.9	25.3	27.4
All reporting .....	5.4	5.0	23.5

a. Based on reporting by 843 of the 1,847 general practitioners. Not corrected for season.

b. Based on reporting by fifty of the seventy-five pediatricians.

### A. WELL CHILD CONFERENCES

(Data are limited to conferences with physicians in attendance.)

A total of 2,041 sessions of well child conferences were held in Missouri during the reported year, 1946. This compares badly with the five thousand sessions held in North Carolina whose total child population in 1945 was 1,212,520—Missouri's child population being 964,021. Ninety-six of the 114 counties and St. Louis in Missouri had no child health conferences during the year. Some other counties had so few sessions that it was evident that only a small part of each county was being served and that continuing, regular supervision was not being given.

*Missouri's Position in Well Child Conference Services Relative to the United States as a Whole.*—(Rates for well child conferences are expressed per children less than 5 years of age; all other community health services are expressed per children less than 15 years of age.)

Visits: Twenty states had more visits to well child conferences per 1,000 children less than 5 years, per year, than did Missouri. The average for the forty-eight states was 182 visits per 1,000 children less than 5 years, per year. (The highest was Maryland and District of Columbia with 499. The lowest was Wyoming with nine.)

Patients: Twenty-eight states had more patients per 1,000 children less than 5 years of age attending well child conferences during one year than did Missouri. (The lowest was South Dakota with six; the average for the forty-eight states was sixty-two.)

In well child conference services, Missouri's position relative to the five selected neighboring states is as follows:

	Visits per Year per 1,000 Children Less Than 5 Years, per Year	Patients per Year per 1,000 Children Less Than 5 Years, per Year
Illinois .....	339	65
Missouri .....	123	40
Nebraska .....	44	23
Kansas .....	29	14
Iowa .....	30	8

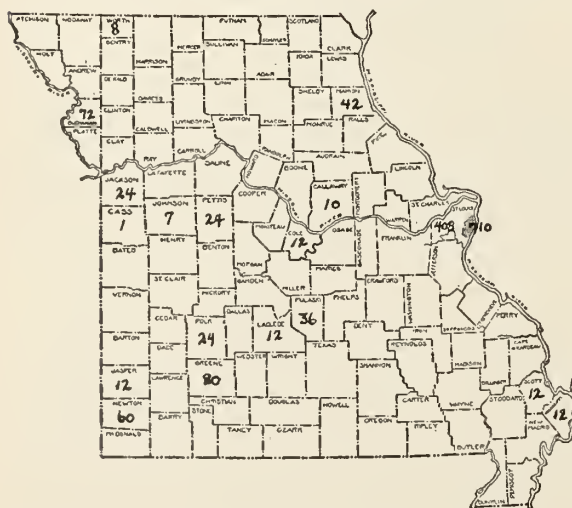


Fig. 9. Counties with medical well child conferences (shaded areas) during the report year. (Figure entered gives number of sessions held in the county.)

The number of sessions, visits and patients per 1,000 children less than 5 years of age during one year, for the five county groups in Missouri, is shown in the following table:

	Sessions	Visits	Patients
Whole state .....	5.6	123	40
Greater metropolitan .....	11.0	336	96
Lesser metropolitan .....	11.1	139	59
Adjacent .....	1.4	14	9
Isolated semirural .....	1.7	16	8
Isolated rural .....	0.7	5	4

It was indicated at the beginning of this chapter that the seven types of community health services under consideration exist in order to increase the efficiency and availability of physicians and nurses who provide them, in areas in which shortage of such professional personnel is most pronounced. Well child conferences are obviously among the most important of such services. While granting the value of such conferences in the metropolitan areas, one must point to their conspicuous inadequacy in the rural areas where the need for them is so much greater. This is shown strikingly in the preceding table, as well as in the tables to follow.

**Race.**—The number of sessions and per cent of total which were for white only, nonwhite only and mixed are shown by county groups:

	Number of Sessions			Per Cent of Total in County Group		
	White	White Non-	Mixed	White	White Non-	Mixed
Whole state	886	424	731	43	21	36
Greater metropolitan	276	244	598	25	22	53
Lesser metropolitan	466	113	72	72	17	11
Adjacent	43	0	1	98	0	2
Isolated semirural	57	67	60	31	36	33
Isolated rural	44	0	0	100	0	0

The average number of children seen per well child conference session follows:

Whole state .....	22
Greater metropolitan .....	31
Lesser metropolitan .....	12
Adjacent .....	10
Isolated semirural .....	10
Isolated rural .....	7

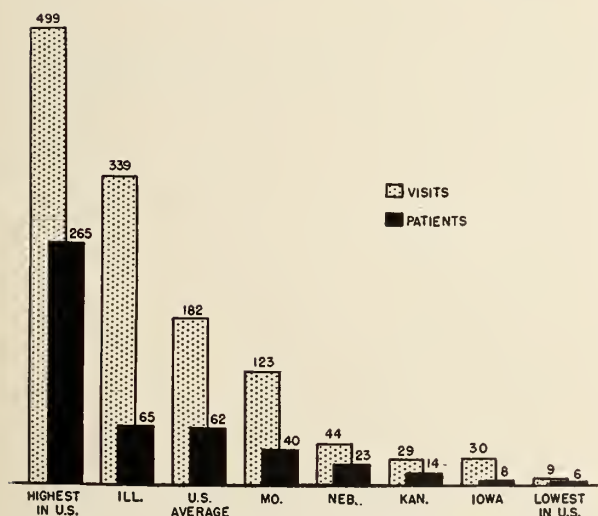


Fig. 10. Rate of services in medical well child conferences in Missouri (visits per 1,000 children under age 5 per year). Comparison with five selected states and highest, average and lowest in the United States.

Thus, only in the greater metropolitan areas in Missouri (with an average of thirty-one children per session) could there be said to be anything approaching crowding at well child conferences. All the other county groups showed relatively poor attendance.

The average number of visits to well child conferences per patient in Missouri by county group follows:

Whole state .....	3.1
Greater metropolitan .....	3.5
Lesser metropolitan .....	2.3
Adjacent .....	1.6
Isolated semirural .....	2.1
Isolated rural .....	1.1

<i>Comparison (Visits per Patient) With Other States</i>	
Highest number visits per patient: Illinois	5.2
Lowest number visits per patient: Vermont	1.0
Average for United States.....	2.9

#### *Five Selected Neighboring States*

Illinois .....	5.2
Iowa .....	3.8
Missouri .....	3.1
Kansas .....	2.0
Nebraska .....	1.9

#### *Practices in Well Child Conferences*

	Number Sessions Reporting	Giving Smallpox and Diphtheria Immunization		Giving Whooping Cough Immunization	
		Number	Per Cent	Number	Per Cent
Whole state	1,952	1,899	97	1,166	60
Greater metropolitan	1,118	1,118	100	1,118	100
Lesser metropolitan	571	571	100	0	0
Adjacent	43	36	84	12	28
Isolated semirural	184	138	75	0	0
Isolated rural	36	36	100	36	100

All 2,041 sessions which reported on the point gave advice to mothers on feeding, care and training.

Other services provided were:

	Number Sessions Reporting	Consultant Service by			
		Nutritionist		Psychologist or Psychiatrist	
		Number	Per Cent	Number	Per Cent
Whole state	2,041	855	42	182	9
Greater metropolitan	1,118	510	46	102	9
Lesser metropolitan	651	152	23	72	11
Adjacent	44	43	98	0	0
Isolated semirural	184	106	58	0	0
Isolated rural	44	44	100	8	18

Thus it would seem that with regard to immunization procedures, inoculation against smallpox and diphtheria are considered "part of the game," and withal an integral part, even in rural areas, where opposition was considerable in the early days. Protection against whooping cough was "spotty." Oddly enough, it was provided routinely at all well child conferences in greater metropolitan and isolated rural conferences, and for none at all in lesser metropolitan and isolated semirural areas. This indicates that if properly "pushed," parents in these areas would accept, perhaps demand, pertussis immunization for their children. (It should be noted that North Carolina is the only state in the country with a compulsory diphtheria immunization law for all infants.)

#### B. MENTAL HYGIENE SERVICES

There were only two mental hygiene clinics in



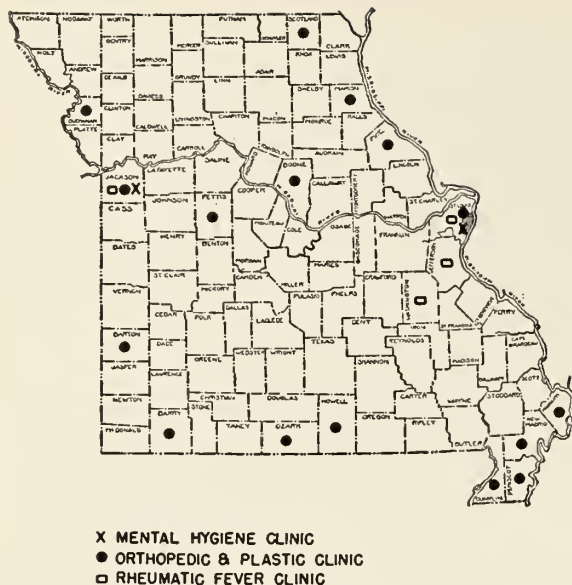


Fig. 11. Location of (a) mental hygiene clinics providing services for children and (b) clinics for crippled children during report year in Missouri.

Missouri and these were in metropolitan counties. With a child population of 964,021, just 489 children were given care in these clinics. Of these, 447 were white, 42 nonwhite. A total of 1,966 visits were made by these children, 1,834 by white, 132 by non-white.

For all forty-eight states, the average number of patients attending mental hygiene clinics per year per 1,000 children was 2.2 (Average number of visits, 6.5.)

Ohio had the highest number of patients per 1,000 children with 8.6. Twenty-four states had more patients per 1,000 children attending mental hygiene clinics than did Missouri. Twelve states had no mental hygiene services during the year.

For the five selected neighboring states, the figures for attendance at mental hygiene clinics follow:

	Patients per 1,000 Children	Visits per 1,000 Children
Illinois .....	2.9	7.8
Kansas .....	1.0	7.3
Iowa .....	0.8	2.2
Missouri .....	0.5	2.0
Nebraska .....	0.0*	0.0*

\*Data incomplete.

#### C. SERVICES FOR THE PHYSICALLY HANDICAPPED

In 1946, the Missouri Services for Crippled Children conducted itinerant clinics for orthopedic and plastic surgery cases in twelve centers; for rheumatic fever and cardiac patients in two. Orthopedic and plastic surgery cases receiving care through the state service were seen also in established hospital clinics in Columbia, Kansas City, St. Joseph and St. Louis; rheumatic fever cases at an established hospital clinic in St. Louis.

Beside the state service, there was the Kansas City Department of Health which sponsored a rheu-

matic fever clinic for residents of Kansas City. Total figures for Missouri follow (1946):

Number of patients..... 2,401  
Number of visits..... 4,218

#### D. PUBLIC HEALTH NURSING SERVICES

It is unnecessary to say that no program of community health services can approach completeness without an adequate staff of public health nurses.

In eighty-one of Missouri's 114 counties and the City of St. Louis, less than one full time nurse for each county was found. For all of these eighty-one counties, there were only nine nurses giving public health nursing service.

Child Population per Full Time Nurse in Missouri  
Children per Full Time Nurse

Whole state .....	3,841
Greater metropolitan counties.....	2,519
Lesser metropolitan .....	1,727

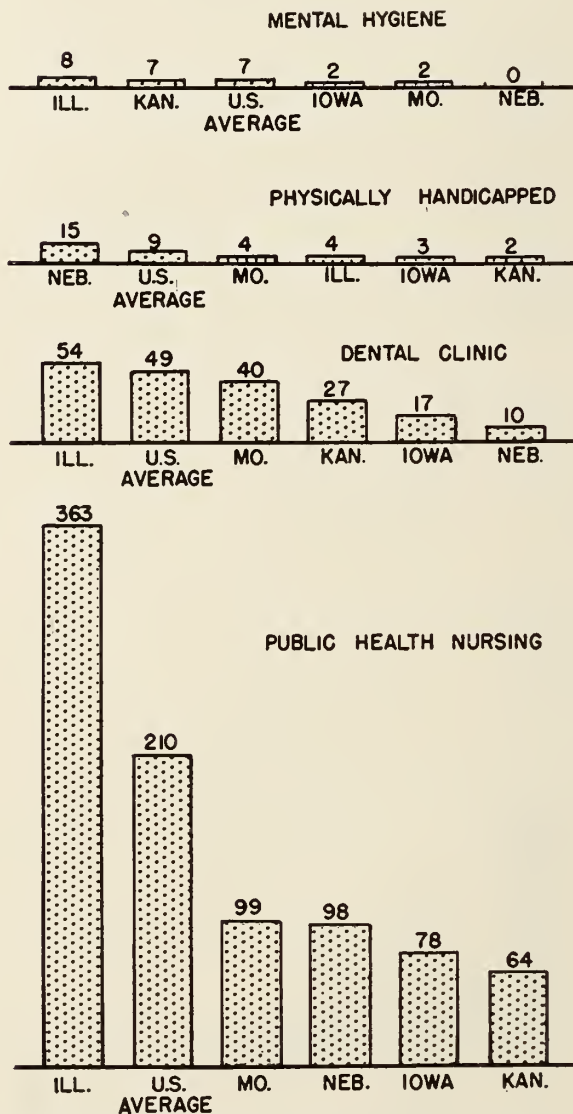


Fig. 12. Rates for specified community health services (visits per 1,000 children per year). Comparison with five selected states and United States average.



Adjacent .....	12,195
Isolated semirural .....	8,475
Isolated rural .....	15,625

*Comparison with Other States.*—There were sixteen states with ratios higher than that of Missouri. The highest ratio of children per full time nurse was that of Texas with 9,505. The lowest was that of Connecticut with 989. The average for all forty-eight states was 2,475.

#### Five Selected Neighboring States

	Children per Full Time Nurse
Illinois .....	2,637
Missouri .....	3,841
Kansas .....	3,967
Iowa .....	4,792
Nebraska .....	5,444

The number of home visits by public health nurses to children in Missouri by county groups (1946) follows:

	Number of Visits per 1,000 Children in One Year
Whole state .....	98.6
Greater metropolitan counties.....	184.2
Lesser metropolitan .....	152.3
Adjacent .....	25.5
Isolated semirural .....	56.7
Isolated rural .....	17.1

*Comparison with Other States.*—Of the forty-eight states, there were thirty with more home visits to children by nurses, per 1,000 children, than Missouri. The state with the greatest number of such visits was New Jersey with 858. That with the smallest was West Virginia with 30.1. The average for the forty-eight states was 209.8.

#### Five Selected Neighboring States

	Number of Visits per 1,000 Children in One Year
Illinois .....	363.4
Missouri .....	98.6
Nebraska .....	98.1
Iowa .....	77.7
Kansas .....	64.1

#### E. SCHOOL HEALTH SERVICES

Of Missouri's 114 counties and St. Louis City 92 were without any organized medical "health service" in the public elementary schools, and 51 without any medical or nursing service to the schools. By definition, a county is considered to be without school medical service if there is not at least one public elementary school in which medical examinations by a physician are performed on (1) all pupils once a year, (2) certain grades once a year or (3) referrals by teachers or nurses.

In the counties having some service, such service may have been confined to one school or to one section of the county. Since the amount of coverage could not be determined from the data obtained, it has been necessary to make this negative approach, reporting the areas with no service, but leaving unanswered the question of the amount or quality in counties with any service.

In Missouri, 42 per cent of the children aged 5 to 14 were in counties without any medical service in the public elementary schools, and 23 per

cent in counties without medical or nursing service in the schools.

*Comparison with Other States.*—Eight states had no children in counties having no organized medical services in public elementary schools. Ten states had half or more of the child population in counties without organized medical services in public elementary schools.

*School Health Services, Five Selected Neighboring States.*—Illinois and Nebraska had 15 to 29 per cent of their child population in counties with no organized medical services in public elementary schools. Kansas and Missouri had 30 to 49 per cent. Iowa had 50 per cent or more. Average for the United States was 22 per cent.

The conduct of school medical service falls for the most part upon the school physicians rather than on the health officers in Missouri. Fourteen health officers assisted with school health examinations compared with 65 school physicians.

Of the 222 nurses working in Missouri's schools, 142 were employed by official education agencies and 80 by official health agencies. The majority of these eighty were county or city public health nurses who included school services as part of their generalized programs.

The percentages of children, white and nonwhite, from 5 to 15 years of age, in counties without school medical service in public elementary schools, by county group in Missouri, are given:

	White	Nonwhite
Whole state .....	43	24.0
Greater metropolitan .....	3	0.7
Lesser metropolitan .....	0	.0
Adjacent .....	78	97.0
Isolated semirural .....	62	66.0
Isolated rural .....	95	100.0

#### F. COMMUNICABLE DISEASE CONTROL

No estimate of the total number of immunizations against specific communicable diseases of children provided in one year can be given. Moreover, physicians were not asked to record the number of immunizations given in their private practices. The data were reported by community health agencies in eighty-four counties; it is not known whether immunizations are given in other counties.

The rates of children immunized per 1,000 as reported by official community health agencies in one year were:

	Immunizations per 1,000 Children		
	Smallpox*	Diphtheria	Whooping Cough
Whole state .....	38.1	38.3	6.5
Greater metropolitan counties .....	43.0	34.3	22.2
Lesser metropolitan counties .....	32.3	43.9	0.6
Adjacent counties .....	27.7	33.5	.0
Isolated semirural counties .....	37.1	35.7	1.0
Isolated rural counties .....	43.4	46.6	0.1

\*Adults included by nine agencies.

#### G. DENTAL SERVICES

For the purposes of this study, a community dental service was defined as one giving dental care other than examinations.

*Rates of Care in Children's Dental Clinics in Missouri  
During One Year (1946)*

	Number per 1,000 Children		Number Visits per Patient
	Patients	Visits	
Whole state .....	18.2	40.5	2.2
Greater metropolitan .....	31.9	87.2	2.7
Lesser metropolitan .....	44.4	80.3	1.8
Adjacent .....	0.0	0.0	0.0
Isolated semirural .....	6.5	10.0	1.5
Isolated rural .....	*	0.1	2.0

\*Less than 0.05.

The concentration of dental clinic services in the metropolitan areas is self evident, as is their scarcity in rural areas.

*Comparison of Dental Services in Missouri with Those in Other States.*—The highest number of visits to dental clinics per 1,000 children was in Massachusetts, 270.6. The lowest was in South Dakota and Idaho, both 0.0. Average for the forty-eight states was 49.4.

*Five Selected Neighboring States*

Illinois .....	53.7
Missouri .....	40.5
Kansas .....	27.4
Iowa .....	17.0
Nebraska .....	10.2

One characteristic of a good dental service for children is the preponderance of fillings over extractions. Provided both services are freely available, the filling-extraction ratio may be taken as a rough index of the extent to which preventive dentistry is applied.

*Filling-Extraction Ratios by County Groups in Missouri*

Whole state .....	1.56
Greater metropolitan .....	1.29
Lesser metropolitan .....	2.64
Adjacent .....	0.00
Isolated semirural .....	4.68
Isolated rural .....	0.00

*Comparison With Other States*

Highest ratio, Oregon.....	10.49
Lowest, West Virginia.....	0.76
Average, forty-eight states.....	2.72

*Five Selected Neighboring States*

Iowa .....	4.00
Illinois .....	3.35
Missouri .....	1.56
Nebraska .....	1.48
Kansas .....	1.26

*Dental Clinic Data by Race in Missouri*

	Patients per 1,000 Children		Visits per 1,000 Children	
	White	Non-White	White	Non-White
Whole state .....	14.3	71.9	35.4	109.1
Greater metropolitan .....	27.7	60.6	86.3	93.0
Lesser metropolitan .....	31.5	222.4	61.2	344.9
Adjacent .....				
Isolated semirural .....	5.9	18.4	9.4	20.1
Isolated rural .....	*		0.1	

\*Less than 0.05.

The preponderance of nonwhite children visiting dental clinics in all county groups is of course striking. It naturally raised the question as to whether it could be accounted for by (a) the altogether inadequate number of Negro dentists, (b) the fact that white dentists see but few Negro children. There is no disputing the former. But concerning the latter, there are no data to show how many children seen as private patients were white and how many nonwhite as this point was not included in the dentists' schedules.

## CHAPTER VI—HOSPITAL FACILITIES AND SERVICES

"A very present help in trouble." (Psalm 46:1)

### A. GENERAL HOSPITALS

Nowhere is the changed attitude of the public toward matters medical more evident than in the way they react to hospitalization. A generation ago, "the hospital" meant having a beloved offspring snatched from the family, access to the child denied and, if young men in white were about, it meant "experimenting on him." But rarely now does one hear such laments as, "He'll grieve himself to death!" or, "Take a gun and shoot me, but don't send my child to the hospital."

One clear and simple explanation of the new attitude lies in the fact that hospitals do children as well as adults more demonstrable good than formerly. Instruments of precision, intravenous therapy, the sulfas, penicillin and other antibiotics have provided an armamentarium lacking within the memory of the oldsters. But, like all blessings, these too must be bought with a price—a price which has been more willingly paid as individuals than as a society.

Communities of sufficient size, willing to pay a sufficient price, may have in their general hospitals not only institutions for the care of the sick but also health centers with outpatient services, public health clinics, health education and training schools for physicians and nurses.

### 1. Facilities and Services for Children

#### (Other Than Newborn)

For present purposes the term "hospitals" is limited to those caring for children, including the newborn. No institution having less than five beds for regular inpatient care is included. Federally owned hospitals (except those operated by the Bureau of Indian Affairs) are excluded. "General" includes maternity and pediatric hospitals.

There are 141 general hospitals in Missouri caring for children. Thirty-five of these have pediatric

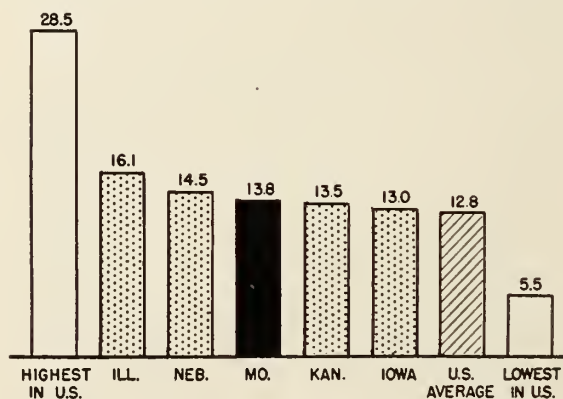


Fig. 13. Beds (total) in general hospitals per 1,000 children in five selected states, highest, average and lowest of all states.



units, i.e., five or more beds permanently set aside for the care of children, in hospitals of twenty-five or more beds. Twenty-six of these general hospitals were osteopathic hospitals, one of which had a pediatric unit. Of the 141 hospitals, nine were "maternity" and two "pediatric." Three admitted children but not maternity cases. Five admitted maternity cases but not children.

Size of Hospitals		Per Cent of Total
	Number of Hospitals	
5- 24 beds	42	30
25- 99 beds	55	39
100-249 beds	31	22
250 or more	13	9
Total	141	100

The general hospitals included in this study have a total of 13,302 beds, or 13.8 per 1,000 children. The osteopathic hospitals had 925 beds. In these hospitals 1,170 beds are set aside for exclusive use of children. This is 8.8 per cent of all beds in the state.

Comparison by County Groups			
	Total Beds	Pediatric Beds	Per Cent of Beds Permanently Set Aside for Children
Whole state	13.8	1.2	8.8
Metropolitan and adjacent counties	20.1	2.1	10.4
Isolated semirural and rural	6.6	0.2	3.1

Comparison With Other States	
General Hospital Beds per 1,000 Children	
Highest of forty-eight states—Nevada	28.5
Lowest of forty-eight states—Mississippi	5.5
Average of forty-eight states	12.8

Five Selected Neighboring States	
Illinois	16.1
Nebraska	14.5
Missouri	13.8
Kansas	13.5
Iowa	13.0

Pediatric Beds per 1,000 Children	
Highest of forty-eight states—Delaware	2.4
Lowest of forty-eight states—Mississippi	0.2
Average of forty-eight states	1.2

Five Selected Neighboring States	
Illinois	1.7
Iowa	1.3
Missouri	1.2
Nebraska	0.9
Kansas	0.7

Percentage of Beds Permanently Set Aside for Children	
Highest of forty-eight states—Delaware	15.8
Lowest of forty-eight states—Mississippi	3.8
Average of forty-eight states	9.3

Five Selected Neighboring States	
Illinois	10.8
Iowa	10.1
Missouri	8.8
Nebraska	6.0
Kansas	5.1

Admittances of children to general hospitals in Missouri totalled 40,464 during the year of the study (1946), giving an annual rate of 42.0 per 1,000 children. Admittances to osteopathic hospitals were 2,483. Of course, Missouri's rate was considerably increased by admittances of children from contiguous areas in neighboring states.

Comparison by County Groups	
	Child Admittances to General Hospitals, per 1,000 Children
Metropolitan and adjacent counties	60.0
Isolated semirural and rural counties	21.6

*Comparison with Other States.*—Thirty-four states had higher admittance rates to general hospitals per 1,000 children per year than Missouri. The highest was Nevada with a rate of 97.3. The lowest was Tennessee with a rate of 25.6. Average for the forty-eight states was 51.4.

#### Five Selected Neighboring States

	Child Admittances to General Hospitals, per Year per 1,000 Children
Illinois	67.9
Iowa	64.7
Nebraska	61.8
Kansas	56.5
Missouri	42.0

#### Admittances of Children to General Hospitals by Size of Hospital (Missouri)

Whole state	100.0 per cent
5- 24 beds	5.2 per cent
25- 99 beds	20.4 per cent
100-249 beds	42.2 per cent
250 or more beds	32.2 per cent

Of the 141 general hospitals in Missouri, 76 restricted their admittances to white, six to non-white. Fifty-nine admitted both white and non-white patients. Data on admittances of Negro children were not reported satisfactorily enough to be included in this study.

## 2. Care of Newborn

Of the total admittances of infants and children (including the newborn) in general hospitals in Missouri (1946) 56 per cent were newborn infants. Data on the proportion of births hospitalized may be found in Chapter I.

At the time of the study (1946) there were in Missouri 2,719 bassinets and 255 incubators, 249 of the former and 36 of the latter in osteopathic hospitals.

## 3. Characteristics of Hospitals Caring for Children

If hospital care has become increasingly in demand, and it has, those who buy it should have some means of judging its value. The following criteria at once come to mind. They are applicable not only to the quality but even to the amount of hospital service rendered. They include space, organization of the pediatric service, medical staff, nursing, special services and certain accepted pediatric practices.

The proportion of children admitted to hospitals with specified characteristics follows:

#### Per Cent of Child Admittances to Hospitals With 25 or More Beds With Specified Characteristics (Missouri)

	Whole State	Metropolitan and Adjacent Counties	Isolated Counties
Separate pediatric unit	73.1	85.5	24.5
Graduate nurse on duty at all times in pediatric unit	66.3	77.4	24.5
Any house staff	73.7	90.0	9.4
Clinical laboratory	88.4	94.9	62.9
Selected clinical lab. services (blood cult., sediment rate, serum protein, sulfa levels)	82.2	90.6	49.1
Qualified dietitian on staff	80.0	88.9	44.4
Separate ward for infants other than newborn	61.9	72.7	19.8
Average percentage	75.1	85.7	33.5

One of the criteria should be selected for special comment before making comparisons on the basis



of average percentages; it is the presence or absence of an intern staff. A sick infant has a far better chance of survival if attended by a physician and house staff with a knowledge of body chemistry and with technical ability in intravenous procedures. Here, Missouri's percentage of 73.7 is fairly high.

*Comparison with Other States.*—In twelve states there was a higher average percentage of children admitted to hospitals having the characteristics studied than there was in Missouri. The highest was Delaware with 94 per cent, and the lowest Mississippi with 29 per cent. Average for the forty-eight states was 72 per cent.

Five Selected Neighboring States	
	Average Percentage of Child Admittances to Hos- pitals with Character- istics Studied
Illinois .....	79
Missouri .....	75
Iowa .....	69
Nebraska .....	66
Kansas .....	62

*Care of the Newborn.*—The proportion of hospital births in hospitals with the specified characteristics in Missouri (1946) follows:

Characteristics Studied	Percentage Hospital- ized Births in Hos- pitals with Specified Characteristics
Nursery for full term sick separate from well	39.2
Any house staff .....	60.3
With room used exclusively for preparation of formulas .....	75.0
Graduate nurse all times, nursery .....	90.0
All milk mixtures for newborns sterilized .....	91.6
Average percentage .....	71.7

*Comparison with Other States (Care of Newborn).*—Twelve states had averages higher than those of Missouri, the highest being Rhode Island with 89 per cent. The lowest was New Mexico with 36 per cent. The average for the forty-eight states was 71 per cent.

Five Selected Neighboring States	
Illinois .....	76 per cent
Missouri .....	72 per cent
Kansas .....	62 per cent
Nebraska .....	61 per cent
Iowa .....	60 per cent

#### 4. The Small Hospital

The pros and cons—from the pediatric point of view—of hospitals with less than twenty-five beds will be discussed in "Conclusions and Recommendations."

In Missouri in the year of the study, 5.2 per cent of child admittances were to hospitals having fewer than twenty-five beds; 7.5 per cent of hospital births were in such hospitals.

#### Comparison of Facilities in Hospitals of Different Size

	Per Cent of Hospitals with Specified Characteristics	
	Fewer Than 25 Beds	25 Beds and More
Registered by A.M.A. ....	33.3	80.8
Clinical laboratory in hospital .....	27.5	76.8
Separate nursery for newborn only .....	95.2	94.9
Graduate nurse on duty at all times in nursery for newborn .....	40.0	81.8
Average percentage .....	49.0	83.6

The relative inadequacy of clinical laboratory facilities and of graduate nursing care of the newborn, in the small hospitals, must be singled out for comment.

#### 5. Facilities for the Care of Acute Poliomyelitis

Of the ninety-four general hospitals in Missouri (with twenty-five or more beds) reporting on the item, twenty-one treat children with acute poliomyelitis and thirty-two admit suspected cases for diagnosis only.

The distribution by county groups of hospitals which accept acute cases of poliomyelitis for care follows:

	Number of Hospitals
Greater metropolitan counties .....	7
Lesser metropolitan counties .....	7
Adjacent counties .....	0
Isolated semirural counties .....	6
Isolated rural counties .....	1

The need of planning for expansion of these hospital facilities in times of epidemics is obvious.

#### B. SPECIAL HOSPITALS

Special Hospitals	Admitting Children	Number Hospitals Admitting Children	Beds for Children Only	Number Children Treated During Year
Tuberculosis .....	1	0	10	649
Nervous and mental <sup>1</sup> .....	5	661	509	1,161
Orthopedic .....	2	195	127	44
Eye, ear, nose, throat <sup>2</sup> .....	2	32		
Convalescent .....	2	58		
Contagious diseases <sup>3</sup> .....	1	5		

1. These include two which accept feeble-minded children only. In these two hospitals are 527 of the beds. Patients treated in them were 498.

2. One of these two hospitals is the Missouri Trachoma Hospital, which did not report the number of children treated.

3. Six general hospitals had contagious disease units, each with at least ten beds. Total beds for children only in these units were fifty-one. Number of beds for adults or children according to need was seventy-seven. Number of beds for adults only was ninety-nine.

During 1946, there were 59,224 days of care to children in such hospitals.

The number of days of care for children in special hospitals during one year in Missouri was 61.4 per 1,000 children.

*Comparison with Other States.*—Twenty-seven states had a number of days' care higher than that of Missouri. Highest was Arizona with 408.5 per 1,000 children, lowest were those of Idaho and Wyoming with 0.0. The average for the forty-eight states was 123.5 days' care per 1,000 children.

Five Selected Neighboring States	
Nebraska .....	109.8 days' care per 1,000 children
Missouri .....	61.4 days' care per 1,000 children
Kansas .....	59.9 days' care per 1,000 children
Illinois .....	57.5 days' care per 1,000 children
Iowa .....	18.1 days' care per 1,000 children

#### C. OUTPATIENT SERVICES FOR CHILDREN

Of the state's 141 general hospitals caring for children, twenty-two operated outpatient departments admitting children.

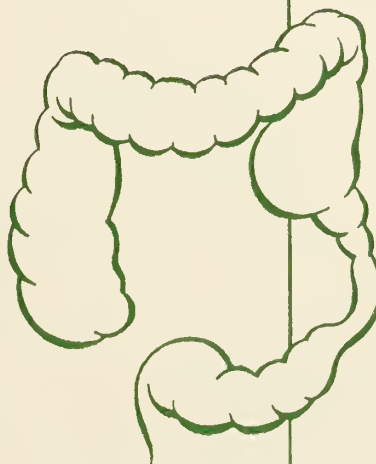
These were distributed as follows:

Greater metropolitan .....	11
Lesser metropolitan .....	7
Adjacent .....	1
Isolated semirural .....	3
Isolated rural .....	0

## Bowel Management of the Irritable Colon . . .

---

"As an aid in reestablishing a normal rhythm, the temporary use of a bland bulk-producer . . . may be beneficial. . . . Patients having irritable colon who believe they are suffering from constipation commonly use high-residue diets, . . . They may not realize that this practice is similar to using irritating cathartics or large enemas and often increases the tendency to constipation by increasing spasm of the colon."\*



Metamucil is "a bland bulk-producer" which gently initiates reflex peristalsis and movement of the intestinal contents. The "smoothage" therapy of Metamucil encourages a return of the normal function of the colon without irritating the mucosa.

## METAMUCIL®

is the highly refined mucilloid of *Plantago ovata* (50%), a seed of the psyllium group, combined with dextrose (50%) as a dispersing agent.



**SEARLE** RESEARCH IN THE SERVICE OF MEDICINE

---

\*Collins, E. N.: The Diagnosis and Treatment of Irritable Colon: Physiologic, Local, Irritative and Psychosomatic Factors, *M. Clin. North America* 32:398 (March) 1948.

There were also six independent medical clinics admitting children, which clinics were distributed as follow:

Greater metropolitan .....	1
Lesser metropolitan .....	4
Adjacent .....	0
Isolated semirural .....	1
Isolated rural .....	0

Of the total of twenty-eight clinics admitting children, twenty-one were separate pediatric clinics.

The number of pediatric clinics furnishing specialist service to children (twenty-one clinics reporting) was as follows:

Allergy .....	9	Surgery .....	5
Cardiology .....	11	Ophthalmology .....	4
Mental hygiene .....	8	Otolaryngology .....	4
Syphilis .....	10	Orthopedics .....	4
Neurology .....	7	Dentistry .....	4

#### D. OSTEOPATHIC HOSPITALS

The number of osteopathic hospitals in Missouri (1946) was twenty-six.

There were three, with possibly a fourth, which were mixed medical and osteopathic.

##### *Osteopathic Hospitals by Size*

	Number of Hospitals	Per Cent of Total
Total number .....	26	
5- 24 beds .....	15	58
24- 99 beds .....	9	34
100-249 beds .....	1	4
250 or more .....	1	4
Total number of beds .....		925
Total number of bassinets .....		249
Total number of incubators .....		36
Child admittances in one year .....		2,483
Hospital births in one year .....		3,002

### CHAPTER VII—SUMMARY AND RECOMMENDATIONS

If there is anything to Missouri's famous attitude of "show me," it is hoped that those Missourians truly interested in the health of children have been "shown" by the facts set forth. If one is content with this position "in the middle of the picture" with regard to child care, the scathing rebuke of the writer of Revelation is deserved: "Because thou art lukewarm, and neither cold nor hot, I will spew thee out of my mouth." As stated at the beginning of Chapter I, Missouri is not so poor but that the state could do far better by the health of the children.

It is an earnest desire to make the summary and recommendations both realistic and challenging to legislators, to welfare workers and, perhaps, most of all to physicians who are so intimately concerned that they are likely to lose their sense of perspective.

Previous studies, as well as the present one, show that it is economic status which determines the quantity, quality and availability of medical and health services. It is the one constant element underlying the differences between the states and between the different sections of this country. As a general rule, the number of children per 1,000 under medical care, the physicians per 1,000 children and the number of visits per 1,000 children

per day increase as the per capita income increases, and vice versa. The improvement in quality is shown, for example, in the low infant mortality rate in the states with high per capita income, and in the higher rate in the states with low per capita income.

It will be noted in comparisons with adjacent states that Illinois leads in services throughout. Income per capita in Illinois was 33 per cent higher than that in Missouri in the years 1944 to 1946. Nebraska, Iowa and Missouri have closely comparable incomes per capita.

Now, if agriculture, climate, trends of population and concentration of industry decide the economic level of a state or region, are not doctors nearly impotent pieces in the game these play? Nearly, but not quite. For physicians are not without influence in their communities, unless they keep their noses so fixed to the grindstones of their practices that they are oblivious to the need of a world of men—and of women and children!

#### SUMMARY

It will make for clarity if the summary of the study is separated from the recommendations made "to whom it may concern."

#### 1. The Economic and Health Setting of the Child

(a) In the year of the study Missouri ranked twenty-eighth in per capita buying power, thirty-fourth in percentage of child population, seventeenth in death rate, twenty-second in infant mortality. In relation to the four comparable selected neighboring states of Illinois, Nebraska, Iowa and Kansas, Missouri occupied an unenviably low position throughout. Nebraska, Iowa and Missouri have about the same per capita income. That of Illinois is about 33 per cent higher.

(b) The nonwhite infant mortality rate in Missouri in 1945 was 83 per cent higher than the rate for white infants. As in other respects in which health statistics for Negroes are so bad, the causes are to be found in poor economic conditions, miserable housing, overcrowding, inadequate nutrition and other factors.

(c) Although the increase in white births in hospitals from 1935 to 1945 was about twice that in nonwhite in Missouri, the percentage of nonwhite hospital deliveries was remarkably high throughout (49 to 68 per cent).

(d) In a study<sup>11</sup> grouping miscellaneous health and sanitation factors, Missouri ranks thirtieth among the forty-eight states, and fifth among the five selected neighboring states.

#### 2. Total Volume of Child Health Services

*Medical Care.*—Children in Missouri receive 25 per cent less medical care in terms of visits or hospital days than do those in the highest of the five selected neighboring states (Nebraska). And children in the isolated counties receive 38 per cent less medical service than those in the metropolitan and adjacent counties. (The actual number of chil-



**Doctor:**

*Make your reservations early for the*  
**Mid-South Post Graduate Medical Assembly**  
 (SIXTIETH ANNUAL SESSION)

*to be held at*

**The Peabody Hotel**

**MEMPHIS, TENNESSEE**

**February 8, 9, 10 and 11, 1949**

The following speakers will contribute to the Program:

**Dr. A. H. Blakemore**  
Surgery  
New York City

**Dr. W. Edward Chamberlain**  
Radiology  
Philadelphia, Pa.

**Dr. Louis H. Clerf**  
Otolaryngology  
Philadelphia, Pa.

**Dr. Frederick A. Coller**  
Surgery  
Ann Arbor, Michigan

**Dr. Arthur C. Curtis**  
Dermatology  
Ann Arbor, Michigan

**Dr. Frederick H. Falls**  
Gynecology  
Chicago, Illinois

**Dr. Frederick A. Figi**  
Otolaryngology  
Rochester, Minnesota

**Dr. John W. Harris**  
Obstetrics  
Madison, Wisconsin

**Dr. Herbert H. Howard**  
Urology  
Boston, Massachusetts

**Dr. Peter C. Kronfeld**  
Ophthalmology  
Chicago, Illinois

**Dr. John H. Lawrence**  
Medical Physics  
Berkeley, California

**Dr. W. T. Longcope**  
Medicine  
Baltimore, Maryland

**Dr. Samuel F. Marshall**  
Surgery  
Boston, Massachusetts

**Dr. Norman F. Miller**  
Gynecology  
Ann Arbor, Michigan

**Dr. Harrison L. McLaughlin**  
Orthopedics  
New York City

**Dr. Raymond W. McNealy**  
Surgery  
Chicago, Illinois

**Dr. James L. Poppen**  
Neurosurgery  
Boston, Massachusetts

**Dr. William A. Reilly**  
Pediatrics  
Little Rock, Arkansas

**Dr. Hobart Reimann**  
Medicine  
Philadelphia, Pa.

**Dr. E. H. Ryncarson**  
Medicine  
Rochester, Minnesota

**Dr. Heyworth Sanford**  
Pediatrics  
Chicago, Illinois

**Dr. Albert M. Snell**  
Medicine  
Rochester, Minnesota

**Dr. John B. Youmans**  
Medicine  
Chicago, Illinois

Programs will be mailed about January 10. If you don't get yours, write for one.

**HENRY B. GOTTEN, M.D.**

*Secretary-Treasurer*

899 Madison Avenue  
Memphis, Tennessee

dren living in the latter group is much higher; and the number of children visiting clinics in the isolated counties is low.)

Of the total number of children under medical care in Missouri (exclusive of the newly born) about one fifth were under care for health supervision.

*Dental Care.*—On one day in Missouri (1946) 2.9 children per 1,000 were under dental care. Missouri thus ranked in this respect twenty-second among the forty-eight states, and lowest among the five selected neighboring states. Dental clinic service was about 3.8 per cent of the total volume of dental care. Dental care, particularly dental clinic service, was exceedingly low (0.02 children per 1,000 per day) in the isolated counties.

### 3. Health Supervision

(a) Of the private physicians' visits for well child followup, 63 per cent were made by general practitioners, 27 per cent by pediatricians, 10 per cent by other specialists. Of the general practitioners' visits to children, 23 per cent were for health supervision. For the pediatricians, this proportion was 58 per cent.

(b) For health supervision of children under 5, twenty-eight states had rates higher than that of Missouri, as did the four neighboring states.

(c) Children under 5 in isolated counties had only one third the rate of health supervision enjoyed by those in metropolitan and adjacent counties.

### 4. Private Practice

(A) *Physicians.*—(a) Of Missouri's 3,073 physicians in private practice (1946) 125 were nonwhite; 710 (about one fourth) practiced in isolated semi-rural and rural counties. Of the latter number, 444 (nearly two thirds) were more than 55 years old. Only seven of the state's seventy-five pediatricians had offices outside the metropolitan areas.

(b) The ratio of children per physician in Missouri was 314. Only eighteen states (including Illinois and Nebraska) had lower ratios. The ratio in Missouri for the isolated counties was about three times as high as that for the metropolitan and adjacent counties.

(c) *Pediatricians.*—The ratio of children per pediatrician (1946) was 12,854. Of the seventy-five pediatricians, forty-two have been certified by the American Board of Pediatrics; sixty-eight had their offices in metropolitan areas.

(d) *Training.*—Twenty-three per cent of the general practitioners reporting said that they had received no hospital training; 58 per cent reported that they had received either no hospital training in pediatrics or less than one month. It must be remembered that a large proportion of the general practitioners were in the age group to which such training was rarely available.

(e) *Services.*—In Missouri, general practitioners provided 73 per cent of the visits to children, pediatricians 13 per cent. Children in adjacent and

isolated counties received only 4 per cent of their care from pediatricians. The average number of pediatricians' visits per day was nineteen.

(B) *Dentists.*—(a) In July 1946 there were 2,043 dentists in private practice in Missouri. Fifty-three of these were nonwhite. For the whole state, there was a ratio of 472 children per dentist. Twelve states had lower ratios, as did three of the five selected neighboring states. In Missouri's metropolitan counties, the ratio was about 300 children per dentist; in the rural, about 1,000.

(b) *Training.*—Of 735 dental practitioners reporting, only thirty-three had received any postgraduate training in pedodontics.

(c) *Services.*—The rate of child visits (per 1,000 per day) for dental care was about four for the metropolitan areas, about two for rural.

There were three times as many visits for fillings as for extractions—a wholesome indication.

### 5. Community Health Services

(a) *Medical Well Child Conferences.*—(1) In point of attendance, Missouri occupies about a middle position among the states, second among the five selected neighboring states. The number of sessions, patients and visits was lower in the isolated areas than in the metropolitan counties. Ninety-six of Missouri's 114 counties had no child health conferences during the year.

It should be repeated that well child conferences, like the other community health services, exist to increase the efficiency and availability of the physicians and dentists and nurses who provide them in areas where shortage of such professional personnel is most pronounced. The tables show their conspicuous inadequacy in the isolated areas where they are most needed. Of the nonwhite group of children, 6.9 per cent live in such areas, but there were no well child conferences for "mixed" or non-white groups.

(2) Besides instructions as to feeding and general care, routine immunization against diphtheria and smallpox was an integral part of the service. Protection against whooping cough was "spotty," and could have been made more general.

(b) *Mental Hygiene Services.*—There were only two such clinics in Missouri, and these were in metropolitan counties. Twenty-four states had more children attending mental hygiene clinics (per year per 1,000 children) than did Missouri. Missouri was fourth of the group of five selected neighboring states.

(c) *Services for the Physically Handicapped.*—In 1946, itinerant clinics for orthopedic and plastic surgery cases were conducted in twelve centers, for rheumatic fever and cardiac patients in two.

(d) *Public Health Nursing Services.*—In six of Missouri's 114 counties there were no nurses. There was less than one full time nurse for each county. For all of these eighty-one there were only nine public health nurses. In isolated rural counties, there were 15,625 children per full time public health nurse. In public health nursing service, Mis-



DRINK  
**Coca-Cola**  
TRADE MARK REG.

You trust  
its quality

**HIGH...WIDE...and Council-Accepted**

**Caminoids\***

TRADE MARK

BRAND OF AMINOPEPTODRATE

*For Oral Administration*

**HIGH** biological value—Contains all of the recognized essential amino acids . . . derived from extracted liver and beef muscle, wheat gluten, soya, yeast, casein, and lactalbumin. One tablespoonful t.i.d. provides 12 Gm. protein as hydrolysate.

**WIDE** patient-acceptance—Notable palatability and adaptability to a variety of vehicles assure adherence to prescribed regimen.



Supplied: Bottles containing 6 oz.; 1-lb., 5-lb., and 10-lb. containers.

\*New designation of Aminoids adopted as a condition of acceptance by the Council on Pharmacy and Chemistry of the American Medical Association. The word Caminoids is an exclusive trademark of The Arlington Chemical Company.

*Arlington*

**THE ARLINGTON CHEMICAL COMPANY • YONKERS 1, NEW YORK**



souri stood thirty-second among the forty-eight states. In point of number of nursing visits per 1,000 children in one year, Missouri was a low second (to Illinois) in the list of five neighboring states.

(e) *School Health Services*.—Of Missouri's 114 counties, and St. Louis City, ninety-two were without any organized medical service in the public elementary schools, fifty-one without any medical or nursing service. Thus 42 per cent of Missouri's children (aged 5 to 14) were in counties without medical service in the schools, 23 per cent in counties without medical or nursing service.

Of the 222 nurses working in Missouri schools, 142 were employed by official education agencies, 80 by official health agencies. In isolated rural areas, 95 per cent of white and 100 per cent of non-white children (aged 5 to 14) were in counties without school medical service of the type described.

(f) *Communicable Disease Control*.—No estimate of total number of immunizations can be given. Whooping cough immunizations ran far below those for smallpox and diphtheria. For the last two, the figure was 38 per 1,000 children.

(g) *Dental Services*.—Children's visits to dental clinics (per 1,000 children) were 40.5 per year—which was below the nation's average of 49.4, and second (to Illinois) in the list of five selected neighboring states. The filling-extraction ratio was 1.56, as compared with the nation's average of 2.72. There was a marked preponderance of nonwhite children visiting dental clinics in all county groups.

#### 6. Hospital Facilities and Services

(a) Communities of sufficient size, willing to pay a sufficient price, may have in their general hospitals not only institutions for the care of the sick but also health centers with outpatient services, public health clinics, health education, training schools for physicians and nurses.

(b) *Facilities and Services for Children*.—(1) There are 141 general hospitals in Missouri caring for children. Thirty-five of these have pediatric units. Of the total of 13,302 beds, 1,170 (8.8 per cent) were for exclusive use of children. Missouri was a little above the national average, third in the group of five neighboring states in the rates for both total beds and those reserved for children.

(2) Admittances of children to general hospitals in Missouri (1946) totalled 40,464—42 per 1,000. Thirty-four states had higher rates.

(3) Of the 141 general hospitals in Missouri, seventy-six restricted their admittances to white patients, six to nonwhite. Fifty-nine admitted both white and nonwhite patients.

(c) *Care of Newborn*.—(1) Of the total admittances of infants and children in general hospitals in Missouri (1946) 56 per cent were newborn infants.

(2) At the time of the study there were in Missouri 2,719 bassinets and 255 incubators.

(d) *Characteristics of Hospitals Caring for Chil-*

*dren*.—Criteria used for evaluating hospitals caring for children were: space, organization of the pediatric service, medical staff, nursing, special services and certain accepted pediatric practices. Of Missouri's child admittances to hospitals, 74 per cent were to hospitals with house staffs. Missouri's average percentage of child admittances to hospitals with these characteristics was 75, or thirteenth highest.

(e) *The Small Hospital*.—In Missouri (1946) 5.2 per cent of child admittances were to hospitals having fewer than twenty-five beds; 7.5 per cent of hospital births were in such hospitals. This study has shown that the greatest deficiencies of such hospitals are (1) lack of house and staff, (2) a critical inadequacy of laboratory and nursing facilities.

(f) *Facilities for the Care of Acute Poliomyelitis*.—Of the ninety-four general hospitals in Missouri (with twenty-five or more beds) reporting on the item, twenty-one treat children with acute poliomyelitis and thirty-two admit suspected cases for diagnosis only.

#### 7. Special Hospitals Admitting Children

With 61.4 days of care per 1,000 children for those in such special hospitals as those for tuberculosis, orthopedic and other conditions (during one year) Missouri stood twenty-eighth among the forty-eight states and second among the five selected states.

#### 8. Outpatient Services for Children

Of the state's 141 general hospitals caring for children, twenty-two operated outpatient departments admitting children. There were six independent clinics admitting children.

#### Osteopathic Hospitals

There were twenty-six osteopathic hospitals in Missouri in 1946, with three, possibly a fourth, which were "mixed" medical and osteopathic. The twenty-six admitted 2,483 children during the year, and had 3,002 hospital births.

#### RECOMMENDATIONS

1. High economic and cultural status is so bound up with a satisfactory level of child health that, although it may sound platitudinous, one must urge physicians to back any movement designed to assure a high level of family income through steady employment at good wages. (This is yearning for Utopia, but it does put first things first!)

2. At every turn in the study, the shortage of doctors (particularly those with pediatric training), dentists and nurses was obvious. One cannot recommend lowering the standards of existing medical and dental schools by increasing the number of their students. But neither can one believe that all of the thousands now denied admission to medical schools are "inferior material." It is urged that the Curators of the University of Missouri and the State Legislature forthwith recruit a competent faculty for providing the two "clinical years."

**R:** only 2 or 3 drops



**PRIVINE 0.05%**

a distinguished nasal

**vasoconstrictor**

**HIGHLY POTENT:** Prompt, complete relief from nasal congestion and hypersecretion usually results from only 2 or 3 drops of Privine hydrochloride 0.05%. Each application provides 2 to 6 hours of nasal comfort.

**BLAND. NON-IRRITATING:** Privine is prepared in an isotonic aqueous solution buffered to a pH of 6.2 to 6.3. Artificial differences in osmotic pressure between solution and epithelium are avoided. Thus, stinging and burning usually are absent.

Privine is generally free of systemic effect. The occasional sedative effect that may be noted in infants and young children is usually due to gross overdosage. Since there is no central nervous stimulation, Privine may be applied before retiring with no resultant interference with restful sleep.



PRIVINE: 0.05% in 1-ounce dropper bottles and 1-pint bottles; 0.1% strength reserved for office procedures, in 1-pint bottles only.



**Ciba**

PHARMACEUTICAL PRODUCTS, INC., SUMMIT, NEW JERSEY

PRIVINE (brand of naphazoline)—Trade Mark Reg. U. S. Pat. Off. 2/1424M

3. It is recommended that the use of funds be continued to defray the expenses of postgraduate courses in pediatrics and preventive medicine to improve the quality of existing medical service to children.

4. With Mountin, Pennell and Brockett (Public Health Reports 61:1689-1699, November, 1946) it is urged that "full use of auxiliary dental hygienists and assistants," be made pending training of additional dentists.

5. It is recommended that at least one additional dental school be established in Missouri, at the same time urging that properly qualified Negro students be admitted. It is felt that the shortage of physicians and dentists is the chief obstacle to the development of improved medical and dental services to the children of Missouri.

6. Pediatricians of the state are urged to give active assistance to the Committee on Infant Care of the Missouri State Medical Association following up and implementing the results of this study. This Committee will from time to time enlist the aid of the various child welfare agencies represented on the advisory board throughout the state.

7. Better distribution of medical and dental care is needed. Until medical and dental schools can provide more trained personnel, it is recommended that the functions and personnel of the Director of Child Hygiene of the Division of Health at Jefferson City be expanded greatly so that (1) through local physicians and dentists, community health services can better meet local needs with regard to well child clinics, immunizations, mental hygiene, dental prophylaxis and care; (2) through ambulance services and arrangements like those in Illinois and Michigan, children requiring specialized hospital care may be taken to adequately staffed and equipped centers in the larger areas; (3) through a greatly increased staff of full time public health personnel children in rural communities may be provided and their parents educated to seek the care described.

8. There should be greater opportunities for training in child health. (a) Departments of pediatrics and of preventive medicine and public health in Missouri medical schools should be allotted more time for the training of medical students in the various aspects of child health. This applies still more to hospitals in which interns are trained. (b)

The plan of "rotating" residents from the teaching hospitals through selected large general hospitals "outstate" (a plan already underway in Missouri) should prove mutually beneficial and is greatly to be encouraged. It is urged that everything possible be done to make rural practice more attractive to young, well trained physicians and surgeons. Strategic location, adequate staffing, provision of laboratory, roentgenologic and other equipment of hospitals are recommended as among the most important factors. (c) A suggestion made in the North Carolina report that the journal of the state medical association institute a monthly "pediatric column" describing new diagnostic and therapeutic procedures and discussing socio-economic problems affecting the children of the state is strongly approved and recommended.

9. A program for premature and other newborn infants is needed. (a) In point of live births in hospitals in 1945, Missouri stood thirty-fifth among the forty-eight states. The expediting of the program already going forward in several hospitals to develop larger, better equipped and better staffed units for premature infants, which will serve as teaching centers for both physicians and nurses is urged.

10. In regard to mental hygiene, although starts have been made at St. Louis and Kansas City, the deficiency in the field of child guidance even in the metropolitan centers, is so great that it is urged that both private and public authorities expend greater efforts in securing funds and personnel.

11. In dental care, it is urged that if and when the State Division of Child Hygiene is granted the large increase in budget and personnel recommended, provision be made for (1) more dental clinics in the rural areas with increase in the number of dental hygienists and assistants, and (2) a coordinated program in the public schools for reaching more children for examination and treatment, the treatment to be provided by public agencies or private practitioners, and (3) both of these recommendations to be carried out only with the approval of the Missouri State Dental Association.

---

This report will be distributed widely. It is a means to an end, not a document to be filed away. If the data presented serve as a stimulus to interested groups to improve the health of the children of Missouri, the toil and expense involved will not have been in vain.



# The Association for the Study of Internal Secretions

## *Announces a Postgraduate Assembly in*

# ENDOCRINOLOGY

**Oklahoma City, Oklahoma**

**Skirvin Hotel**

**February 21-26, 1949**

The faculty will consist of prominent researchers and clinical endocrinologists in the various branches of the medical sciences, gathered from the United States and Canada and will include the following:

**Dr. Willard M. Allen**, Professor  
and Head, Department of Obstetrics and  
Gynecology  
Washington University School of Medicine

**Dr. Edwin B. Astwood**  
Research Professor of Medicine  
Tufts College

**Dr. J. S. L. Browne**  
Professor of Medicine  
McGill University

**Dr. Edward A. Doisy**, Professor  
and Head, Department of Biochemistry  
St. Louis University School of Medicine

**Dr. Roberto Escamilla**  
Associate Clinical Professor of Medicine  
University of California Medical School

**Dr. Laurance W. Kinsell**  
Associate Clinical Professor of Medicine  
University of California Medical School

**Dr. C. N. H. Long**  
Sterling Professor of Physiological Chemistry &  
Dean, Yale University School of Medicine

**Dr. E. C. Hamblen**  
Associate Professor of Obstetrics and Gynecology  
Duke University School of Medicine

**Dr. Cyril M. MacBryde**  
Associate Professor of Clinical Medicine  
Washington University School of Medicine

**Dr. E. Perry McCullagh**, Chief  
Dept. of Endocrinology & Metabolism  
Cleveland Clinic

**Dr. Harold L. Mason**, Professor  
Physiological Chemistry, Mayo Foundation  
University of Minnesota

**Dr. Warren O. Nelson**  
Professor of Anatomy  
Wayne University

**Dr. Edward Rynearson**, Member  
Associate Professor of Medicine  
Mayo Foundation, University of Minnesota

**Dr. Hans Selye**  
Professor of Experimental Medicine  
University of Montreal

**Dr. E. Kost Shelton**  
Associate Professor of Medicine  
University of Southern California

**Dr. Paul M. Starr**  
Clinical Professor of Medicine  
University of Southern California

**Dr. Willard O. Thompson**  
Clinical Professor of Medicine  
University of Illinois College of Medicine

**Dr. George Thorn**  
Hershey Professor of Physic  
Harvard Medical School

**Dr. Henry H. Turner**  
Associate Professor of Medicine  
University of Oklahoma School of Medicine

**Dr. Lawson Wilkins**  
Associate Professor of Pediatrics  
Johns Hopkins Hospital

This course will be a practical one of interest and value to the specialists and those in general practice. The program will consist of lectures, clinics and demonstrations. Ample time will be given to questions and answers at the end of each session, and registrants are encouraged to contact members of the faculty for individual discussions.

A fee of \$100 will be charged for the entire course and the attendance will be limited to 100. **REGISTRATION WILL BE IN THE ORDER OF CHECKS RECEIVED AND WILL CLOSE ON FEBRUARY 1, 1949.** Should there be an insufficient number of applicants to fill the course, the registration fee will be immediately refunded in its full amount.

Please forward application on your letterhead, together with check payable to The Association for the Study of Internal Secretions, to Henry H. Turner, M.D., Chairman of the Postgraduate Committee, 1200 North Walker Street, Oklahoma City, Oklahoma, before Feb. 1, 1949.

Applicants should make reservations directly with hotels of their choice. Some of the better downtown hotels in Oklahoma City, listed according to their proximity to the Skirvin, are: Skirvin Tower, Huckins, Wells-Roberts, Biltmore and Black.

## PRESIDENT'S PAGE

This issue of THE JOURNAL contains the report of the American Academy of Pediatrics study of Child Health Services in Missouri. The recommendations have been approved by the Committee on Infant Care of the Missouri State Medical Association. This report should be read by all members.



Recommendation No. 2 of the report states: "At every turn in the study the shortage of doctors (particularly those with pediatric training), dentists and nurses was obvious. One cannot recommend lowering the standards of existing medical and dental schools by increasing the number of their students. But neither can one believe that all of the thousands now denied admission to medical schools are 'inferior material.' It is urged that the Curators of the University of Missouri and the State Legislature forthwith recruit a competent faculty for providing the two 'clinical years.' "

Again evidence is found of the shortage of physicians and again the Missouri State Medical Association urges the establishment of a full four year course in medicine at the University of Missouri.

*Robert M. Muller, M.D.*

# THE JOURNAL

of the

Missouri State Medical Association

623 Missouri Bldg. Telephone: Newstead 0404-05

Subscription . . . \$3.00 a year in advance

*Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent.*

JANUARY, 1949

## EDITORIALS

### ANNUAL SESSION

The program for the Annual Session to be held in Kansas City, March 27 through March 30, is nearing completion. A few specific titles must still be obtained. However, the program will start on Monday morning, March 28, with a symposium on "Coronary Disease" with Joseph T. Roberts, M.D., Little Rock, Arkansas; Paul S. Barker, M.D., Ann Arbor, Michigan, and Emmett Bay, M.D., Chicago, taking part.

The Monday afternoon session will include a talk on "Undulant Fever" by W. W. Spink, M.D., Minneapolis; an address on "Psychosomatic Medicine in General Practice" by Winfred Overholser, M.D., Washington, D. C.; a talk on "Modern Surgical Procedures for Carcinoma of the Colon and Rectum" by Howard Mahorner, M.D., New Orleans, and a talk on "Genito-urinary Surgery" by John F. Patton, M.D., St. Louis.

"Treatment of Diabetes Mellitus with Intermediate Insulin" will be discussed by Arthur R. Colwell, M.D., Evanston, Illinois, on Tuesday morning, followed by "Surgical Treatment of Advanced Cancer" by Everett D. Sugarbaker, M.D., Jefferson City, and a panel on "Gastric Pain" with the medical viewpoint presented by A. C. Ivy, M.D., Chicago, and the surgical side given by J. Dewey Bisgard, M.D., Omaha, Nebraska.

"Trauma" will be the subject of two panels presented on Tuesday afternoon when moderators will direct questions to a panel composed of a plastic surgeon, a general surgeon, an orthopedic surgeon and a neurosurgeon. George A. Aiken, M.D., Marshall, will be moderator of the first panel and those participating in the panel will be J. Barrett Brown, M.D., St. Louis; A. P. Rowlette, M.D., Moberly; Jacob Kulowski, M.D., St. Joseph, and F. A. Carmichael, Jr., M.D., Kansas City. In the second panel F. L. Kneibert, M.D., Poplar Bluff, will act as moderator and participants will be David B. Robinson, M.D., Kansas City; Robert D. Duncan, M.D., Springfield; Frederick A. Jostes, M.D., St. Louis, and Edmund A. Smolik, M.D., St. Louis.

The scientific session will close with an obstetric-pediatric program on Wednesday morning in which

obstetricians and pediatricians will discuss "Diagnosis and Treatment of the Newborn Infant." Frank R. Lock, M.D., Winston-Salem, North Carolina, will open the session.

The House of Delegates will convene on Sunday afternoon, March 27; Monday afternoon, March 28, and on Wednesday afternoon, March 30.

A hotel reservation blank appears in this issue of THE JOURNAL and it is suggested that members make their reservations direct to the hotel of their choice.

### AMERICAN MEDICAL ASSOCIATION INTERIM SESSION

A good scientific program featured by television of medical clinics and surgical operations was available to physicians who attended the second annual Interim Session of the American Medical Association held in St. Louis, November 30 to December 3. The television program was carried on a closed circuit from Barnes, Firman Desloge and St. Mary's hospitals to Kiel Auditorium where the meeting took place. Surgical and medical groups from St. Louis and Washington universities took part in the television programs.

The House of Delegates after lengthy discussion voted to reject the proposals submitted by the Blue Cross-Blue Shield Commissions for a national service agency to handle the national enrollment of persons in those organizations. The House created a planning committee of nine persons to help solve the many problems facing the practice of medicine today.

The House voted an assessment of \$25.00 on each member of the American Medical Association in order to finance a program of education of the American people on the many contributions which the medical profession has made to alleviate disease, preserve life and postpone death. The program will stress the importance of our present system of voluntary care and present the true facts about medical care and health protection.

The medical profession as a whole is of the firm opinion that government control of medicine would lower the standards of medical care in the United States and is so sincere in this belief that it feels everything possible should be done to prevent such control from being thrust upon the public.

### FATHER SCHWITALLA

Father Alphonse M. Schwitalla, S. J., Dean of the St. Louis University School of Medicine, was given a medal at the American Medical Association Interim Session in recognition of his distinguished service in maintaining the ideals of medicine and as an educator in the field of medical education. This is the first time in the history of the American Medical Association that such an award has been made.

His many friends will regret that ill health has



caused him to resign as dean of the St. Louis University School of Medicine, effective December 11, 1948. Father Schwitalla has been dean for the last twenty-one years. A new wing at the south end of the medical school building will be named in his honor.

#### MEMORIAL IN HONOR OF DR. BREDECK

A memorial fund in honor of the late Joseph F. Bredeck, M.D., long time health commissioner of the City of St. Louis, has been established with the purpose of perpetuating the memory of Dr. Bredeck and his work and interest in public health. The nature of the memorial will depend upon the interest and the response of the citizens of St. Louis who are being asked to cooperate in this project. Contributions should be sent to Joseph C. Peden, M.D., 1015 Missouri Theater Building, St. Louis 3. The committee is composed of Mr. Joseph F. Holland, secretary, Dr. Peden, treasurer, and Frederick E. Woodruff, M.D., chairman.

#### MISSOURI'S MENTAL INSTITUTIONS

The report of the Committee on Legislative Research, which has been making a study of the care of the mentally ill in Missouri, was released December 11, 1948. The study included the state mental hospitals at Fulton, St. Joseph, Nevada and Farmington but did not include the St. Louis City Sanitarium which was transferred to state operation in July of 1948.

Overcrowding was listed as one of the serious problems, the hospitals having a population of 9,016 patients whereas 7,800 is the normal capacity.

Lack of personnel, especially physicians, nurses and attendants, continues to be a major problem. Physicians totaled seventeen, whereas at least thirty-six are needed. Each physician takes care of an average of 528 patients.

The following quotation from the report indicates that even with the personnel shortage the hospitals still are rendering a fair grade of service: "Missouri is neither at the head nor the rear of the procession of states in the care of the mentally ill. Missouri State Hospitals, on the whole, are well managed, clean and as efficient as existing circumstances would appear to permit. However, lacking adequate personnel, modern methods of admission and programs of prevention, it must be admitted Missouri does only a fair job of treating its mentally afflicted. Some of the needs such as adequate hospital staffs will not be met readily; but given the proper tools the Missouri State Hospitals, without radical changes, either in equipment or policy, could acquire high rank among such institutions in the nation."

Improvements being made at present are additional buildings at all the institutions, individual cottages for physician personnel and their families and better salaries and working conditions for all

employees. Many of the buildings, however, will not be ready for at least a year.

Governor Donnell and Governor Donnelly have been interested in the problem. The state legislature for the last four years has done much to improve the situation. The Committee on Mental Health of the Missouri State Medical Association, working through the auspices of the Community Health League, has long been alert to the need for improvement. The Committee on Mental Health and the Community Health League will continue to furnish any help that the next legislature or Governor Forrest Smith may require so that the institutions of the State of Missouri may attain the "high rank among such institutions in the nation."

#### NEWS NOTES

Vilray P. Blair, M.D., St. Louis, was guest of honor at a meeting of the American Society of Plastic and Reconstructive Surgery at White Sulphur Springs, Va., on November 20, and was presented a certificate which reads: "Dr. Vilray Papin Blair—In recognition of his leadership in the organization and development of the specialty of plastic surgery and his outstanding scientific contributions to the advancement of its practice."

Emma Arabella Thompson, M.D., Breckenridge, was honored by her community on November 5 for her many years of service as a physician.

J. Earl Smith, M.D., St. Louis, has been appointed St. Louis City Health Commissioner to fill the vacancy created by the death of Joseph F. Bredeck, M.D.

W. S. Sewell, M.D., Springfield, was a guest speaker of the Buffalo Rotary Club on November 2.

C. Edgar Virden, M.D., Kansas City, was elected president of the Missouri Division of the American Cancer Society at a meeting recently. Edwin C. Ernst, M.D., St. Louis, was elected vice president.

Robert Bartlett, M.D., St. Louis, was a guest of the Jefferson-Hamilton County Medical Society at McLeansboro, Illinois, on December 30 and spoke on "The Differential Diagnosis and Management of Surgical Lesions of the Colon and Rectum."

Several fellowships in "Exfoliative Cytology" have been announced through the Missouri Division of the American Cancer Society. The requirements are that the person be a graduate of a class A medical school of the United States or Canada, be a citizen of the United States, be less than 50 years of age, have completed two years of post-graduate training in pathology and conform to requirements of the institution to which he applies.

# accurate, safe urography

# NEO-IOPAX



## NEO-IOPAX\* IS ACCURATE.

Its optimal radiopacity produces clear delineation of the urinary tract permitting diagnostic interpretations to be made confidently.



**NEO-IOPAX IS SAFE.** Its unblemished record<sup>1</sup>—*more than fifteen years of effective urinary tract visualization without a single fatality reported in the literature*—remains to be equalled. Administered intravenously, using proper technic, NEO-IOPAX is remarkably free from even minor side-effects.<sup>2,3</sup>

## NEO-IOPAX

(BRAND OF SODIUM IODOMETHAMATE)



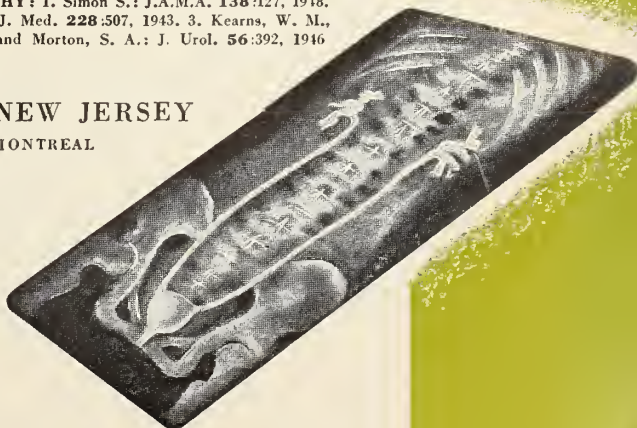
**NEO-IOPAX** is available as a stable, crystal-clear solution of disodium N-methyl-3, 5-diiodo-chelidamate in 10, 20 and 30 cc. ampuls of 50% concentration and in 10 and 20 cc. ampuls of 75% concentration.

Boxes of 1, 5 and 20 ampuls.

**BIBLIOGRAPHY:** 1. Simon S.: J.A.M.A. 138:127, 1948.  
2. Pearman, R. O.: New England J. Med. 228:507, 1943. 3. Kearns, W. M., Helke, H., and Morton, S. A.: J. Urol. 56:392, 1946

\*®

**Schering** CORPORATION • BLOOMFIELD, NEW JERSEY  
IN CANADA, SCHERING CORPORATION LIMITED, MONTREAL





## MUSINGS OF THE FIELD SECRETARY

Approximately one fourth of the counties in Missouri have health councils. Some of these are active and some, lacking leadership, are not. These councils have all been organized for the purpose of gaining cooperative community action toward the improvement of health and the solution of specific health problems in the local area. The membership is voluntary and composed of individuals and in some cases organizations who are actually interested in working for improvement in the health conditions of their communities. These councils all need more leadership and participation by the local physicians if they are to achieve any appreciable measure of their objective. In passing, might not these health councils be interested in what happens to medical service in this country?

Health Forums, featuring health talks to the lay public, will be launched in early 1949 in Springfield as a public service project of the Greene County Medical Society and its Woman's Auxiliary in co-operation with the Committee on Health and Public Instruction of the Association. Health forums have been flourishing in Kansas City for some years with the blessings of the Jackson County Medical Society.

It is probable that a bill to enact a hospital licensing law for the state will be introduced in the Missouri legislature during the next session.

The Missouri Brucellosis Council is quite active considering ways and means of controlling Bang's disease in the state. Besides being an issue of considerable economic magnitude, it has become a public health issue justifying more study and investigation on the part of public health authorities and the medical profession.

---

## DEATHS

---

**Wachenfeld, Carl H., M.D.**, St. Louis, a graduate of Washington University School of Medicine, 1910; honor member of the St. Louis Medical Society; aged 60; died October 18.

**Thompson, Nathan P., M.D.**, St. Louis, a graduate of the Missouri Medical College, 1888; Fellow of the American Medical Association; honor member of the St. Louis Medical Society; aged 80; died October 30.

**Hamilton, Eugene P., M.D.**, Richmond, a graduate of St. Louis University School of Medicine, 1908; honor member of the Jackson County Medical Society; retired; aged 67; died November 1.

**Guyot, J. De Voine, M.D.**, Jefferson City, a graduate of Jefferson Medical College of Philadelphia, 1906; member of the Cole County Medical Society; aged 63; died November 3.

**Barber, M. D., M.D.**, Fredericktown, a graduate of Barnes Medical College, 1899; member, past president and treasurer of the St. Francois-Iron-Madison-Washington-Reynolds County Medical Society; aged 78; died November 7.

**Womack, James R., M.D.**, Houston, a graduate of Northwestern Medical College, St. Joseph, 1893; member

of the South Central Counties Medical Society; aged 79; died November 8.

**Koritschoner, Robert, M.D.**, Kansas City, a graduate of Hessische Ludwigs-Universitat Medizinische Fakultat, 1910; Fellow of the American Medical Association; member of the Jackson County Medical Society; aged 63; died November 15.

**Conrad, Harry S., M.D.**, St. Joseph, a graduate of Ensworth Medical College, St. Joseph, 1913; Fellow of the American Medical Association; member of the Buchanan County Medical Society; aged 61; died November 20.

---

## MISCELLANY

---

### MEDICAL PUBLIC RELATIONS CONFERENCE

Two hundred and forty medical public relations leaders from all parts of the United States attended the sessions of the first National Medical Public Relations Conference which was held during the Interim Session of the American Medical Association.

The theme of the conference, which was sponsored by the American Medical Association, was "Common Targets in Medical Public Relations."

The large turnout plus many requests for a repeat performance indicate that a second and expanded conference will be held next year.

Representatives from state medical associations in forty-three states and Hawaii attended. They included presidents, executive secretaries, public relations directors and chairmen of public relations committees. In addition, twenty-two county societies and nineteen related national organizations were represented.

The theme was chosen because a survey among state associations conducted by American Medical Association's public relations department last spring showed a wide divergence in public relations objectives and the value of an interchange of experiences and thinking.

Dr. George F. Lull, Secretary and General Manager of the American Medical Association, and chairman of the luncheon session, opened the conference with an address of welcome. Lawrence W. Rember, his Executive Assistant in charge of public relations and coordination, presented the findings of the public relations survey of state societies. He said that a definite advance in the field of medical public relations is being made as a result of the more uniform and common-denominator objectives agreed upon by the various states. He pointed out that the six targets selected for the afternoon clinic were a fine start toward a more uniform nationwide program.

Dr. Claude Robinson, president of the Opinion Research Corporation of Princeton, New Jersey, in addressing the conference on the topic "The Public Speaks on Health," said that the doctors should take a few leaves out of the commercial world's textbook and follow their merchandising technics. He told them, "Make a better product. Do a better job of selling." Dr. Robinson also stressed the fact that the public is "ends-conscious." He suggested to the doctors that, since the medical profession and the government backers of the Ewing report both agree on the objective of obtaining widespread good health for the people of the United States, the doctors should concentrate on a discussion of the "means," where the real difference of opinion lies.

Speakers for the afternoon Public Relations Problem Clinic were all experienced men drawn from the state



# Fifth Chicago Medical Society Annual Clinical Conference

MARCH 1, 2, 3, 4, 1949

PALMER HOUSE

CHICAGO

A scientific program planned to bring information concerning newer developments in all fields of medicine and presented by a group of outstanding speakers.

A wide range of scientific exhibits which promise to be of special interest. Time given for viewing the well displayed technical exhibits. Luncheon round tables where your questions will be answered.

*Make your reservations at the PALMER HOUSE.*

# MILWAUKEE SANITARIUM

WAUWATOSA, WISCONSIN

## FOR NERVOUS DISORDERS

(Chicago Office—1117 Marshall Field Annex  
Wednesday, 1-3 P. M.)

Maintaining the highest standards for more than a half century, the Milwaukee Sanitarium stands for all that is best in the care and treatment of nervous disorders. Photographs and particulars on request.

JOSEF A. KINDWALL, M.D.  
CARROLL W. OSGOOD, M.D.  
WILLIAM T. KRADWELL, M.D.  
BENJAMIN A. RUSKIN, M.D.  
LEWIS DANZIGER, M.D.  
RUSSELL C. MORRISON, M.D.  
G. CHARLES SUTCH, M.D.  
RAYMOND HEADLEE, M.D.

ARTHUR J. PATEK, M.D., Consultant

G. H. SCHROEDER, Business Manager

COLONIAL HALL—One of the 14 Units in "Cottage Plan."



societies. They gave case history reports, well documented with facts and ideas taken from their own works.

Lester H. Perry, Executive Secretary of the Medical Society of the State of Pennsylvania, speaking on "Selling the Need for Public Relations to the Profession," said that doctors need to develop further an awareness of the immediacy of social problems—that is, problems dealing with their patients in relation to their community—in addition to their present awareness in the field of scientific advancement of medicine; they need understanding of the economics of medicine, such as the costs of medical service.

Dr. Charles G. Hayden, Boston, Medical Director of the Massachusetts Medical Service, displayed colored slides of newspaper advertisements which were used in the Massachusetts area for the promotion of the Massachusetts Medical Service. He described in detail what reader effects could be expected from the use of each advertisement.

Theodore Wiprud, Executive Director and Secretary of the Medical Society of the District of Columbia, furnished attendees with a complete description of a highly effective emergency and night call system. Mr. Wiprud offered the public relations executives his assistance and advice in setting up such systems, and said, "We are satisfied that telephone secretarial services such as ours have won many friends for the medical profession. The fact that the physician or the alternate designated by him is readily available makes for grateful patients."

C. H. Crownhart, Secretary of the State Medical Society of Wisconsin, spoke on "Cooperating with Special Publics." He described the Wisconsin experience with labor and cooperative groups and revealed Wisconsin's desire to cooperate with special publics, including press and radio, in the solution of community problems relating to medicine and health.

Henry S. Johnson, Director of Public Relations and Medical Service of the Medical Society of Virginia, in speaking of "Cooperating with Health Agencies," described the Council on Health and Medical Care which was officially organized in 1946 in Virginia. It is made up of thirty-seven state wide organizations who together work toward informing the people of Virginia, educating them to strive for improvements, and providing a working relationship between the medical profession and the public.

The concluding speech of the afternoon was Clem Whitaker's presentation of his public relations firm's experiences in working with the California Medical Association in offering Californians a voluntary solution to their health care problems. He told the conference, "Four years ago, only about 2,500,000 California citizens were enrolled in voluntary health insurance plans. Today (as a result of California medicine's continuing educational campaign) there are more than 100 voluntary health insurance systems operating in California, with over 5,000,000 insured members—a million more than Governor Warren promised to care for under his compulsory program."

Mr. Whitaker was besieged with questions following his talk, showing the intense interest of medical public relations people in furthering the extension of voluntary means of solving health problems.

The dinner meeting of the Conference was presided over by Dr. Elmer L. Henderson, Chairman of the Board of Trustees of the American Medical Association. He introduced Dr. Roscoe L. Sensenich, President of

the Association, who gave a brief talk on "The Profession Needs Public Relations."

Dr. Sensenich said, "We welcome and enlist the support of all those who are fighting for the preservation of a free society as opposed to a state-controlled nation such as characterized the dictatorships of Europe. The attack upon medicine is an attack on every phase of our business, economic and social life that is now free."

The final speaker of the evening, Conger Reynolds, Director of Public Relations for the Standard Oil Company of Indiana, reported in case history form on the nation wide public relations program of the oil industry. He told the conference, "The formula that must be followed, I feel sure, is the same for the medical profession that it is for business. Good relations result from X plus Y—right living plus telling people about the right living."

"I think there is probably no business or profession that has less to atone for in failure to live right than does the medical profession, but I think there is probably no profession that has more to atone for in failure to tell the world of its doing than has the medical profession. You have been so inhibited by your taboo on advertising as it applies to the individual that you have seriously neglected the telling of the story of the service of the medical profession to mankind. As a result, you have neglected particularly the telling of the story of freedom as a factor in the progress of the medical profession and as the keystone of its devotion to the patients' interest."

Outside groups who attended the conference by special invitation were the Blue Cross-Blue Shield Commissions, the American Hospital Association, the American College of Radiology, American Pharmaceutical Manufacturer's Association, American Academy of General Practice, American Congress on Obstetrics and Gynecology, National Physicians Committee, American Cancer Society, Catholic Hospital Association, U. S. Public Health Service, American College of Chest Physicians, American College of Surgeons, Associated Medical Care Plans, American Dental Association, American Bar Association and some representatives of individual hospitals.

## TUBERCULOSIS ABSTRACT

*Issued Monthly by the National Tuberculosis Association. Vol. XXII, No. 1, January, 1949.*

"Doctor, should I do any flying?" Many patients with tuberculosis of the lungs want an answer to this sometimes difficult question. Whether or not it is wise for them to fly depends on a number of things. Some can do it safely. The rest are facing danger.

### HAZARDS OF FLYING FOR TB PATIENTS

Air on the ground is much heavier than it is a mile or two up. At sea level it exerts a pressure of 15 pounds on each square inch of the body surface, which is not felt because it presses equally on all sides. This pressure diminishes rapidly as one rises from sea level. In other words, the higher one goes, the lower the pressure.

#### Inside Air Expands

A toy balloon has rubber walls that stretch. Take this balloon up in the sky and it will get bigger because



## CHECK LIST

for choice of  
a laxative

Phospho-  
Soda  
(FLEET)\* TYPE OF  
ACTION

- ✓ Prompt action
- ✓ Thorough action
- ✓ Gentle action

SIDE  
EFFECTS

- ✓ Free from Mucosal Irritation
- ✓ Absence of Constipation Rebound
- ✓ No Development of Tolerance
- ✓ Safe from Excessive Dehydration
- ✓ No Disturbance of Absorption of Nutritive Elements
- ✓ Causes no Pelvic Congestion
- ✓ No Patient Discomfort
- ✓ Nonhabituating
- ✓ Free from Cumulative Effects

ADMINIS-  
TRATION

- ✓ Flexible Dosage
- ✓ Uniform Potency
- ✓ Pleasant Taste

## Judicious Laxation



## through controlled action

Phospho-Soda (Fleet)\*, over the years, has won discriminating preference by thousands of physicians . . . because of its controlled action—its freedom from undesirable side effect—and its ease of administration. Your prescription of Phospho-Soda (Fleet)\* assures effective (and safe) results. Liberal samples on request.

**C. B. FLEET CO. INC.**  
LYNCHBURG, VIRGINIA

\*'PHOSPHO-SODA' and 'FLEET' are registered trade-marks of C. B. Fleet Co., Inc.



TRADE REG. U. S. PAT. OFF. MARK  
**PHOSPHO-SODA**  
(FLEET)\*

Phospho-Soda (Fleet)\* is a solution containing in each 100 cc. sodium biphosphate 48 Gm. and sodium phosphate 18 Gm.

ACCEPTED FOR ADVERTISING BY THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION



the air inside expands as the pressure of the air surrounding the balloon decreases.

Many patients with pulmonary tuberculosis have abnormal collections of air in their bodies. A cavity in the lung represents such a collection—so do pneumothorax and pneumoperitoneum. They are major hazards in flying since they behave like the balloon.

The size of these abnormal collections of air will vary with the height above sea level. They will become 7 per cent larger at 2,000 feet, about 50 per cent larger at 10,000 feet and nearly 100 per cent larger at 16,000 feet.

Commercial planes usually fly below 10,000 feet. They may have to fly higher when crossing mountains or encountering storms. At any height, changes can be expected in all collections of air.

#### Breathing Hazards

A refill for pneumothorax or pneumoperitoneum is calculated to produce the right pressure on the lung. A bigger refill might do harm. Going up in an airplane is just like getting a bigger refill.

Flying is definitely hazardous for those who have pneumothorax complicated by adhesions as they may break or they may pull hard enough to rip the surface of the lung. Air will then leak into the pneumothorax air pocket and dangerously increase its size. Massive increase will push the heart toward the opposite side of the chest and compress the opposite lung. If respiration is embarrassed, the patient may become alarmingly short of breath, have palpation, sudden weakness, even shock.

Some patients have pneumothorax compressing both lungs. Their capacity to breathe is much diminished. Flying for them is contraindicated as it can well bring on severe shortness of breath and other frightening symptoms.

#### Pressure and Hernia

Beneath the breast bone one lung is separated from the other by a group of structures known as the mediastinum. This mediastinum has several weak spots. Through these a pneumothorax may bulge into the opposite side of the chest. This is called a hernia of the mediastinum and is not without danger even on the ground. In flight, such a situation can become exceedingly uncomfortable.

Those patients who notice discomfort after pneumothorax or pneumoperitoneum refills will certainly have greater discomfort when flying. Those who are short of breath on exertion will have more difficulty when flying. Patients who have recently bled from the lungs should postpone any thought of flying because of the danger of reopening the blood vessel.

Cavities produced by tuberculosis frequently contain air which expands in flight. When air can escape from a cavity the danger is minimal. If an obstruction is present the trapped air in expanding may tear the walls of the cavity or injure a blood vessel with subsequent bleeding which can threaten life.

To prevent serious discomfort or damage, some patients may have to breathe oxygen through a mask when flying. Other patients will fare better if air is removed from their pneumothorax or pneumoperitoneum before they fly. Airplanes that fly far above the earth, 20,000 or 30,000 feet, are pressurized. Pumping systems maintain an air pressure inside the cabins simulating conditions much closer to the ground. Otherwise, no one could remain alive at those heights. Never-

theless, a few patients face danger in a pressurized airplane because the pressure in the cabin cannot be kept at ground level values.

The tuberculous patient is wise who consults his doctor before he flies.

*Hazards of Flying for TB Patients, Ezra Volk Bridge, M.D., The NTA Bulletin, May, 1948.*

## SOCIETY PROCEEDINGS

### SECOND COUNCILOR DISTRICT

W. F. FRANCKA, HANNIBAL, COUNCILOR

An afternoon and evening meeting of the Second Councilor District was held at the Merchants' Hotel, Moberly, on November 11. The afternoon program consisted of three scientific talks: "Present Day Indications for Hysterectomy," by Leo J. Hartnett, M.D., St. Louis; "The Climacteric in Women and Men," by August A. Werner, M.D., St. Louis; "Newer Ideas in the Treatment of Common Neurologic Disorders," by Irwin Levy, M.D., St. Louis.

Following a social hour and dinner, the seventy physicians and guests present were favored with two presentations embracing important aspects of the practice of medicine not always given due consideration. In this respect "The Doctor and the Law" was discussed by William Crowds, Attorney, St. Louis, and "A Challenge to Medicine" was presented by Robert Mueller, M.D., St. Louis, President of the Association.

W. F. FRANCKA, M.D., Councilor.

### FOURTH COUNCILOR DISTRICT

OTTO W. KOCH, CLAYTON, COUNCILOR

Twenty-six physicians from Franklin, Lincoln, Pike and St. Charles counties met in the Dixie Room of the Southern Air in Wentzville on December 9 to hear Daniel L. Sexton, M.D., St. Louis, speak on "The Use and Abuse of Sex Hormones." The interest manifested in this talk might well indicate a desire on the part of physicians for more such practical presentations.

JOSEPH C. CREECH, M.D., Secretary,  
Lincoln County Medical Society.

### FIFTH COUNCILOR DISTRICT

J. F. JOLLEY, MEXICO, COUNCILOR

Sixty-five physicians and guests attended an afternoon and evening meeting of the Fifth Councilor District at the Governor Hotel, Jefferson City, on December 9.

The afternoon session consisted of two practical scientific presentations, a talk by Robert M. O'Brien, M.D., St. Louis, on "Low Back Pain" and a talk by Heinz Haffner, M.D., St. Louis, on "Parenteral Fluids."

The evening session was initiated by a pleasant social hour which was followed by dinner. A mixed quartet from the Jefferson City high school sang a number of popular numbers during the dinner and then gave way to one of the host physicians, R. P. Dorris, M.D., Jefferson City, who entertained for a short time. Following a number of introductions, those present were privileged to hear a short talk by a representative of the Missouri State Chamber of Commerce. This was followed by an address by Trawick H. Stubbs, M.D., Dean



even after **40**, a woman's work is never done...

*Dishes, dustpans, a thousand details...the three "d's" of household drudgery...are challenge enough at any age, but a stack of dinner dishes can look mountain high to the woman in the menopause. This is a disquieting aspect of the daily life of such patients that physicians can bring into proper perspective with "Premarin."*

*"Premarin" therapy, it has been found, has in it a certain "plus" that produces a sense of well-being in most women. "Premarin" quickly relieves the symptoms of the menopause. It is orally active, and is rapidly absorbed from the intestine.*



While sodium estrone sulfate is the principal estrogen in "Premarin," other equine estrogens...estradiol, equilin, equilenin, hippulin...are probably also present in varying amounts as water soluble conjugates.

**"PREMARIN"**



ESTROGENIC SUBSTANCES (WATER SOLUBLE)  
also known as CONJUGATED ESTROGENS (equine)

**Ayerst, McKenna & Harrison Limited** 22 East 40th Street, New York 16, New York

# *The Importance of Protein Adequacy In Diabetes Mellitus*

It appears in the light of recent experience that the daily protein requirement of the diabetic has been underestimated and calls for an upward revision.

The success obtained in diabetic retinopathy from the use of high protein diets emphasizes the deleterious possibilities of hypoalbuminemia in this metabolic disease.

In view of the excellent results observed from a high protein intake, in many forms of hepatic disease, a dietary rich in protein is suggested as a therapeutic measure in the management of liver enlargement, one of the frequent complications of diabetes.<sup>1</sup> Since impaired liver function reduces the efficacy of insulin, prevention of liver enlargement by a liberal allowance of protein in the daily diet of the diabetic appears an important factor in the control of this disease. With an estimated 2,000,000 diabetics in the United States<sup>2</sup> every benefit achieved in this field makes itself felt on a truly large scale.

Meat is an outstanding source of protein in the dietary of the patient with diabetes mellitus for these reasons: It is notably rich in protein, from 17 to 20 per cent of its uncooked, and from 25 to 30 per cent of its cooked weight. The protein of meat, regardless of cut or kind, whether fresh, cured, or canned, is biologically complete. All meat is of excellent digestibility—from 96 to 98 per cent. Furthermore, meat ranks with the best sources of B vitamins, potassium and phosphorus, all of which are essential factors in the metabolism of carbohydrate.

<sup>1</sup>Nutrition in Diabetes, Nutrition Rev. 6:257 (Sept.) 1948.

<sup>2</sup>Diabetes and Arteriosclerosis in Youth, Editorial, J.A.M.A. 135:1074 (Dec. 20) 1947.

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.



**A m e r i c a n   M e a t   I n s t i t u t e**

Main Office, Chicago...Members Throughout the United States



of the School of Medicine of the University of Missouri, on "Doctors in the Doghouse."

J. F. JOLLEY, M.D., Councilor.

### NINTH COUNCILOR DISTRICT

E. C. BOHRER, WEST PLAINS, COUNCILOR

#### South Central Counties Medical Society

The South Central Counties Medical Society met at the Elliott Hotel in Mountain Grove on November 19 for a dinner meeting with the following members and visitors present: Drs. A. J. Fuson, Mansfield; R. W. Denney, H. G. Frame, R. A. Ryan and A. C. Ames, Mountain Grove; R. E. Musser, Willow Springs; Rollin H. Smith and C. F. Callihan, West Plains; Deborah Doan, Bakersfield; W. S. Sewell, W. J. Park and Mr. John P. Gass, Springfield.

After dinner the meeting was called to order by the president, Dr. Callihan, and the minutes of the last two meetings were read and approved.

The application of Dr. R. E. Musser for membership by transfer from the Miller County Medical Society was approved unanimously.

The secretary presented the plan of the Association to honor at the annual session in Kansas City in March those men who have practiced fifty years or more.

Dr. Park presented a talk on "Hypertension" in which he emphasized what is not known about its cause and treatment.

Mr. Gass explained the Blue Cross plan.

Dr. Sewell spoke on "Socialized Medicine."

A vote of thanks was given the speakers and the meeting was adjourned to meet in Cabool on December 17.

A. C. AMES, M.D., Secretary.

### TENTH COUNCILOR DISTRICT

FRANK W. HALL, CAPE GIRARDEAU, COUNCILOR

A joint dinner meeting of the societies of the Tenth Councilor District was held at Dusty's Steak House, Caruthersville, on November 18. Despite heavy rain, thirty-eight physicians were in attendance to enjoy a social hour, and "honest to goodness steak" and to hear M. Pinson Neal, M.D., Columbia, speak on "Diagnoses Commonly Missed in General Practice." A number of physicians drove more than a hundred miles in definitely inclement weather to partake of the values of this meeting.

FRANK W. HALL, M.D., Councilor.

## WOMAN'S AUXILIARY

### STUDENT LOAN FUND

The rules and regulations of the Student Loan Fund of the Woman's Auxiliary to the Missouri State Medical Association follow:

#### I. Title

1. This fund shall be known as the Student Loan Fund of the Woman's Auxiliary to the Missouri State Medical Association.

#### II. Purpose

1. This fund is to be used to further the medical education of Missouri boys and girls.

#### III. Rules and Regulations

1. This money shall be obtained through the efforts

of the county and city Auxiliaries. The goal set for each Auxiliary is the minimum amount of 50 cents per member annually. This is to be added to the \$1,000.00 now in the loan fund.

2. The total amount of money to be loaned in any one year shall be \$600.00 except in case there is no worthy applicant for one year or more, then the accumulated funds thus accruing may be loaned in any year.

3. The money shall be loaned at a yearly rate of 2 per cent interest, the notes to become interest bearing three years from the date of graduation.

4. Upon graduation all notes shall be consolidated and signed by recipient of the loan.

5. The state chairman of the student loan fund committee shall send a yearly statement of indebtedness of recipient by March 1.

6. If the time should come when the need for student loan fund no longer exists, then it may be diverted to other philanthropic use by a two thirds majority vote of the Executive Board.

#### IV. Eligibility of Applicants

1. The applicant must be a Missouri boy or girl.

2. The applicant must be in the junior or senior year of an accredited medical school.

3. The applicant must be of high moral character.

4. The applicant must have an acceptable scholastic rating.

5. The applicant must fill out an application blank, accompanied by the names and addresses of three references.

6. The applicant should indicate a willingness to practice medicine in rural Missouri.

#### V. Administrative Body

1. This fund shall be administered by a committee of five members, three of whom shall be elected by the Executive Board of the Auxiliary with varying terms of one, two and three years. After the order is established, one shall be elected annually to take the place of the retiring member. Two members shall be from the Missouri State Medical Association, appointed by the President of that organization. The President and President-elect of the Auxiliary shall be ex-officio members of the committee.

2. The committee shall be vested with full power to approve, make or deny loans.

3. The chairman of the student loan fund committee shall maintain contact with all recipients of loans.

4. All applicants are to be notified that in the event of their leaving school before graduation or if their conduct or grades are unsatisfactory, the money becomes due and payable.

## BOOK REVIEWS

PSYCHIATRY FOR THE PEDIATRICIAN. By Hale F. Shirley, M.D., Associate Professor of Pediatrics and Psychiatry, Executive Director of the Child Psychiatry Unit, Stanford University School of Medicine. The Commonwealth Fund, New York, 1948. Price \$4.50.

At last a book is offered, written by a pediatrician who has given psychiatry special attention. I believe pediatricians generally will approve the principles and practices of mental hygiene expounded in this book. One is really surprised at the difference between the position adopted now and that taken by a book issued by The Commonwealth Fund several years ago. I am gratified to find that the author has eliminated the extreme terminology (really a jargon) of psychiatry in

a practical and readable book. It is true that "psychiatric verbiage is a stumbling block for many medical students." . . . "The psychiatric vocabulary, like the medical vocabulary, has its value for those working in the field, but the medical student has a relatively short time to devote to learning psychiatric concepts." The striking objective of modern pediatrics is a simplicity of language, why can not practical psychiatry follow this example?

The concentration of the author on the most frequent problems which confront the pediatrician is commendable. Throughout the work, a brief citation of clinical cases adds much to the clearness of the text.

The chapter on the Basic Concepts in Child Guidance is highly pleasing, although some technical vocabulary had to be introduced. His presentation of the superego is masterly and any practitioner can grasp its significance in a few minutes of reading.

The chapter on the "Fundamental Emotional Needs of the Child" is particularly interesting. However, the section on "Affection" should have been amplified. I am not sure that the word "affection" covers the ground. A person may have an affection for a dog or cat, but is the word expressive of that complex sentiment known as "mother-love"? This is hard to analyze and difficult to describe except by the mother herself. Pediatricians would like to see the term mother-love restored to its original greatness. What right has the psychologist to soften the word "mother-love" by the feeble term "affections."

His admonition that the "child needs to learn that certain things are not done" is excellent, but it seems to me that the section on discipline, which now is universally regarded as a necessary part of training, is weakened by the space devoted to the negative side of the question. It is true that "indiscriminate slapping and whacking have no value whatsoever," but should not the child learn that certain of his acts arouse anger in the parent and the harsh words, accentuated by a slap, are the expression of this anger? When shall the child learn that a certain behavior excites anger in his playmates?

The whole subject of discipline and especially corporal punishment is in a chaotic state. I believe it needs further study and no unqualified directions as to what disciplinary measures can be given. The parent must learn by trial and error what procedures are effective in restraining a child from misbehavior.

I am pleased with the reasonable methods outlined in the chapter on "Development and Habit Training." Here one finds a marked difference from the older conceptions and attitudes.

An abundance of space is devoted to thumb-sucking, a subject that recently has received contradictory discussions. The directions for feeding and elimination habits are acceptably modernized.

The emotional factors and problems are discussed extensively but, unfortunately, the whole subject of emotions still eludes the scientific domain. I am glad to find the author's support of a religious training for the child.

Sexual factors and problems receive careful attention, especially in the adolescent period. "The best safeguard for a normal sexual development in childhood is a wholesome home life." Really, this covers the whole subject, but how one can build homes that are emotionally and culturally sane is an unanswered question. Even the pediatrician finds enormous bars to social sublimity everywhere.

This book is highly recommended to pediatricians and practitioners.

J. Z.

TREATMENT OF HEART DISEASE, by William A. Brams, M.S., M.D., Ph.D., Associate Professor of Medicine, Northwestern University Medical School, and Attending Physicians, Michael Reese Hospital, Chicago.

Illustrated. W. B. Saunders Company. Philadelphia and London. 1948. Price \$3.50.

This new book, "Treatment of Heart Disease," by Dr. Brams, is a valuable addition to the exhaustive literature on heart disease. In his preface Dr. Brams states that the book has been written as a practical guide for the general practitioner and medical student in the care and treatment of heart disease, based upon the author's personal experience and practice. While it is obvious that Dr. Brams has tried to describe clearly his personal methods used in the treatment of the patient, it is equally evident that his broad knowledge of cardiac literature has been the guide in determining his own therapeutic procedures. This personalizing makes the book both readable and useful and even though the trained cardiologist may not always agree in detail with the methods described that should not detract from the value of this book to the physician who has found himself unable to keep pace with the advances in this special field.

The first chapter, dealing with the pharmacologic action of drugs used in the treatment of heart disease, is, in my opinion, the most useful chapter in the book, presenting as it does in easily understandable terms the real basis for all drug treatment later described. If one thoroughly digests this chapter his care of the cardiac patient will be much improved.

The other chapters dealing with most of the phases of heart disease from the treatment of congestive heart failure and coronary artery disease through the disturbances of cardiac rhythm to the final chapter on surgery and heart disease all have as their keynote the practical aspects and detail so valuable in the care of the patient.

One should not end this brief review without commending the author for a job well done.

A. E. S.

GENERAL ENDOCRINOLOGY, by C. Donnell Turner, Ph.D., Associate Professor of Zoology at Northwestern University. Illustrated. W. B. Saunders Company. Philadelphia & London. 1948. Price \$6.75.

This is a textbook of basic endocrinology for students of experimental biology. Endocrinology is regarded as the science of chemical coordination of the organism, and this book describes and discusses the integrative mechanism of an endocrine order which is widespread among vertebrates, invertebrates and plants. The subject matter is approached from an experimental rather than a clinical point of view. Although the characterization of clinical endocrinopathies is not emphasized, the human being is used to illustrate the operation of biologic principles.

This book may be read and studied carefully by every medical man and it is of especial interest to internists and endocrinologists. It contains a wealth of factual material that throws considerable light on clinical syndromes. It is an excellent textbook and is highly recommended "outside reading."

L. C.

HEART, A PHYSIOLOGIC AND CLINICAL STUDY OF CARDIO-VASCULAR DISEASES, by Aldo A. Luisada, M.D., Instructor in Physiology and Pharmacology, Tufts College Medical School Lecturer in Medicine; Lecturer, Postgraduate Division, Tufts College Medical School; Associate in Medicine, Beth Israel Hospital, Boston, Mass. With a Foreword by Herrman L. Blumgart, Physician-in-Chief, Beth Israel Hospital; Professor of Medicine, Harvard Medical School. Williams & Wilkins Company. Baltimore. 1948. Price \$10.00.

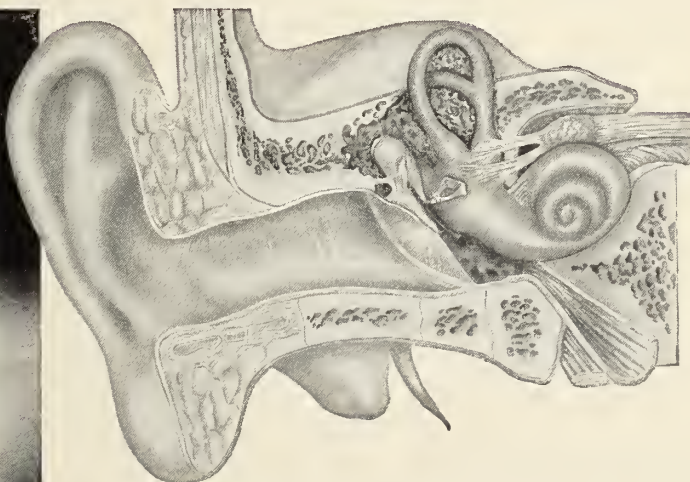
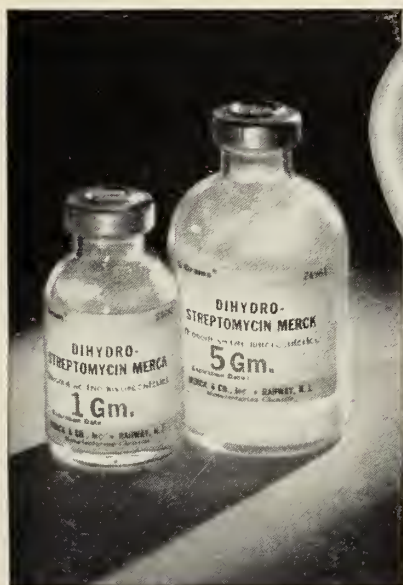
This textbook presents a new and interesting approach to the study of the heart. The author's wide experience in the field of physiologic investigation, clinical pharmacology and his studies in phonocardiography make him highly qualified for this task.



# Announcing...

# DIHYDROSTREPTOMYCIN

A New, Dramatic Advance In Antibiotic Therapy



• Extremely Low Incidence of Vestibular Disturbances

- Less Frequent Allergic Manifestations
- Unsurpassed Purity
- Undiminished Antibacterial Activity against *Mycobacterium tuberculosis*

Dihydrostreptomycin Merck is a new, highly purified antibiotic, chemically distinct from streptomycin, and characterized by greatly reduced neurotoxicity.

Allergic manifestations due to dihydrostreptomycin therapy are rare, and no local skin irritation or other allergic phenomena have been reported thus far among personnel who frequently handle this drug.

Dihydrostreptomycin Merck and Streptomycin Calcium Chloride Complex Merck may be used interchangeably in the treatment of tuberculosis.

## DIHYDROSTREPTOMYCIN

## MERCK

(supplied as the sulfate or the hydrochloride)



MERCK & CO., Inc.

*Manufacturing Chemists*

RAHWAY, N. J.



The text commences with a chronologic recording of important events in the history of cardiology dating from the year 1500. Although this method of listing historical events appears abbreviated, it facilitates remembering the important developments and discoveries.

The chapter on "Development of the Cardio-Vascular System" actually makes this complex subject easy and understandable. To the practitioner and to the neophyte in cardiovascular disease this feature will be a definite attraction.

Seventy-two pages are devoted to "The Technical Study of the Cardiac Patient." This is another of the outstanding chapters in the text. It is featured by innumerable sketches, photographs, graphic schemes, phonocardiograms and electrocardiograms. In fact, the utilization of diagrams to clarify technical points is an attraction throughout the book. Along with the usual etiologic classification of heart diseases, an anatomic-clinical classification is presented and correlated with the former.

Those interested in phonocardiography will find much emphasis on this particular method of technical study. The author brings to this book much of his own experience and research with the recording of heart sounds. To others this particular feature may seem unduly emphasized and superfluous in a book written for general practitioners and students.

The text is well written and the author has compiled an extensive bibliography at the end of each chapter. It is concluded with a compilation of diets and prescriptions which physicians will find useful; and a summary of treatment in cardiovascular emergencies. This book is recommended for the student of cardiovascular disease as well as the practitioner of medicine. R. P.

**DISEASES AFFECTING THE VULVA**, by Elizabeth Hunt, B.A., M.D., Ch.B. (Liverp.) Honorary Consulting Dermatologist, South London Hospital for Women; Honorary Dermatologist, New Sussex Hospital for Women and Children, Brighton; Temporarily Honorary Dermatologist, Royal Infirmary, Liverpool; Formerly Senior Medical Officer, Radium Institute and Hospital for Skin and Cancer Diseases, Liverpool; Acting Honorary Dermatologist, Royal Sussex County Hospital, Brighton. Third edition, revised, with 36 illustrations and 19 plates in colour. St. Louis, The C. V. Mosby Company. 1948. 211p. \$7.50.

This third edition dealing with diseases of the vulva written by an English dermatologist has several important additions in the matter of treatment. The use of sulfonamides and penicillin has been added. Streptomycin and thyrothricin are omitted.

The various diseases are taken up in logical manner after a chapter on the anatomy of the region. The disorders are distinguished finely with careful discussion of the etiology, gross and microscopic pathology. There are nineteen excellent color plates dealing chiefly with the Lichen group of disorders. There are thirty-six black and white illustrations most of which are photomicrographs of poor quality.

The prescriptions are in Latin and employ the apothecary system. Some of the terms used are not familiar to the average practitioner or druggist in this country. These include: "blackwash," "Milton," "tri-trol," "spirit and lead lotion," "surgical spirit." It is regrettable that in an American edition the American equivalent is not given in the text or in the appendices.

The portions dealing with treatment are generalized in many instances and constitute, in my opinion, the weakest part of the book. However, it stresses the importance of examination and treatment of the patient as a complete human individual rather than narrowing attention exclusively to the vulva region.

Any person who has the desire to study 192 pages of text dealing with diseases affecting a circumscribed portion of the female anatomy will find the book worth

while. For the busy practitioner who seeks a ready reference for vulva conditions as they present themselves, the book could be classed as "moderately helpful." E. G. H.

**PREOPERATIVE AND POSTOPERATIVE CARE OF SURGICAL PATIENTS**, by Hugh C. Ilgenfritz, A.B., M.D., F.A.C.S. Formerly Assistant Professor of Surgery, Louisiana State University School of Medicine, and Visiting Surgeon, Charity Hospital of Louisiana at New Orleans with Foreword by Urban Maes, M.D., D.Sc., F.A.C.S. Emeritus Professor of Surgery, Louisiana State University School of Medicine; Consulting Surgeon, Charity Hospital of Louisiana at New Orleans; Consulting Surgeon, Touro Infirmary; Consulting Surgeon, Veterans Administration Hospital, New Orleans. Illustrated. C. V. Mosby Company. St. Louis. 1948. Price \$10.00.

This book gives an amazingly complete and up to date coverage of preoperative and postoperative care. Since the book runs to 898 pages, it is evident that the subject is not a simple one. This indeed is more evidence of the new direction of surgery, that is, that whereas, up until the time of Crawford, Long and Lister, surgery was essentially a matter of speed and anatomy, followed by the German schools which emphasized pathology and technic, we are now benefiting by the labor of the surgical physiologist and his studies of normal and disturbed functions.

The patient who enters the hospital today inevitably has his blood and urine examined. He may have his basal metabolism, vital capacity or carbon dioxide combining power determined; his kidney function, various liver functions, pancreatic function (at least as related to blood sugars), and the digestive powers of his intestinal tract estimated. Various roentgen ray functional tests such as the gastrointestinal series, the cholecystogram or the excretion urogram may be made.

Prior to surgery, the patient may receive glucose, mineral salts, protein or amino acids, water, plasma or whole blood. Following surgery, depletion of any of these substances may be corrected with considerable precision. The complications of surgery may be prevented or treated.

All of this is discussed fully in this book. It is recommended both for reading and reference by all those who undertake the care of the surgical patient. B. S. P.

**CLINICAL LABORATORY METHODS AND DIAGNOSIS. A Text book on Laboratory Procedures with Their Interpretation**, by R. B. H. Gradwohl, M.D., Director of the Gradwohl Laboratories and Gradwohl School of Laboratory Technique; Pathologist to Christian Hospital; Director, Research Laboratory, St. Louis Metropolitan Police Department, St. Louis, Mo. C. V. Mosby Company. St. Louis. 1948. Price for the 3 volumes \$40.00. Review of such bulky work as this does not lend itself to detailed analysis. The three volume work obviously is intended to be encyclopedic in nature and it seems to me that it accomplishes this purpose. Almost every conceivable test which can be done in the laboratory is described and many special fields are included which vary from bacteriology methods through electrocardiography and roentgen ray technics.

The first volume is devoted to consideration of urine, blood and gastric analysis while volume two includes bacteriology, toxicology and electrocardiography. Volume three deals with parasitology and tropical medicine. The index to volume one unfortunately is placed in volume two which constitutes a handicap in ready reference. Included in the text are discussions of various phases of medicine amply discussed in other publications and which might well have been omitted.

This edition contains a fairly complete discussion of the Rh factor including newer trends in nomenclature



**"FOR ME  
ALWAYS"**

## Because **DARICRAFT**

1. is EASILY DIGESTED
2. has 400 U. S. P. Units of VITAMIN D per pint of evaporated milk.
3. has HIGH FOOD VALUE
4. has an IMPROVED FLAVOR
5. is HOMOGENIZED
6. is STERILIZED
7. is from INSPECTED HERDS
8. is SPECIALLY PROCESSED
9. is UNIFORM
10. will WHIP QUICKLY

**PRESCRIBED BY MANY DOCTORS**  
... You also may want to utilize Daricraft as a solution to your infant feeding problems, as well as in special diets for convalescents.

**PRODUCERS CREAMERY CO., SPRINGFIELD, MISSOURI**



**From where I sit  
by Joe Marsh**

## **"Husbands, Wives, and Marriage"**

*Maybe you read that survey published recently in one of the national magazines, entitled "Husbands, Wives, and Marriage."*

*It showed that among happily married couples, those who criticized themselves outnumbered those who criticized the other person. Among unhappily married couples, it was just the opposite—each one tended to criticize the other.*

*That's the way it is in our town, as I guess it is in yours. Criticism, whether it's of a wife's taste for hats, or a husband's taste for pipe tobacco and an evening glass of beer or ale, is a sure start towards unhappiness.*

*As for what made happy marriages, companionship within the home was listed most important of all. And from where I sit, a husband and wife who can spend an evening by the fire—with nothing more exciting than a glass of beer, and a friendly conversation—are a truly well-matched couple!*

*Joe Marsh*



and the various technics used for the detection of the Rh factor.

There is a chapter on special technic outlining procedures for the less frequently employed tests such as assay of vitamins and endocrines.

All in all the three volumes should serve as a useful reference work for clinical pathologists, practitioners and students but it will be difficult in some cases to select the test which will yield the most accurate results.  
R. O. M.

**PSYCHOBIOLOGY AND PSYCHIATRY, A Textbook of Normal and Abnormal Human Behavior**, by Wendell Muncie, M.D., Practicing Psychiatrist; Chairman, Medical Advisory Board, Seton Institute, Baltimore, Md.; Associate Professor of Psychiatry, Johns Hopkins University; Consultant in Psychiatry, U.S.V.A. Second Edition. With 70 Illustrations. St. Louis. C. V. Mosby Company. 1948. Price \$9.00.

This is a well written text on psychiatry. This compact book is divided nicely into appropriate chapters, covering 620 pages. Many newer things in psychiatry and the older fundamental conceptions are considered in the three parts.

Part 1 "Psychobiology," treats the subject of normal behavior. Part 2 covers abnormal behavior—pathology and psychiatry. Part 3 gives due consideration to the modern treatment of the various psychiatric disorders. Possibly the reader might desire more detail for some of the therapeutic procedures. Thirteen chapters on a study of his own personality suggest that the student's ego attracts him to a consideration of psychiatry with a primary idea of introspection relative to his own behavior, normal or pathologic. The author considers five stages of life: (1) infancy to age 3, (2) childhood, covering 2 to 10 or 15, (3) adolescence, (4) maturity, adolescence to involution, (5) involution.

There is an interesting chapter on the history of psychiatry from an early period to the present date.

The training of the author under Dr. Adolf Meyer at Johns Hopkins is seen throughout the work. Dr. Meyer's researches and instructions in psychobiology, symbolization and consciousness are definitely reflected. The term *ergasias* derived from normal work or labor, and the pathologic state indicated under *oligergasia*, *holergasias*, *parergasia*, *dysergasia* and *anergasia* were developed by him. This classification for the clinical and pathologic investigations is covered fully in part two.

Part three should be of interest to the general practitioner especially, the specialist and the student, in that these hundred pages deal solely with treatment. Treatment is considered from the standpoint of caring for the patient in the home, the hospital or special institutions for mental diseases. One chapter is devoted to the treatment of the various convulsive disorders, including the genuine epilepsies. The advantages and disadvantages of the bromides, phenobarbital, dilantin sodium and tridions are discussed. A recent remedy, mesantoin, which is valuable, has not been discussed. General hygiene and diet for epilepsy is given careful consideration.  
A. L. S.

**PHARMACOLOGY THERAPEUTICS AND PRESCRIPTION WRITING, For Students and Practitioners**, by Walter Arthur Bastedo, M.D., Consulting Physician, St. Luke's Hospital, New York, St. Vincent's Hospital, Staten Island, and the Staten Island Hospital; President, United States Pharmacopoeial Convention 1930-1940; Member of Revision Committee, U. S. Pharmacopoeia. Fifth Edition. Philadelphia. W. B. Saunders Company. 1947. Price \$8.50.

This book is one that would be useful to have on the shelf for quick references as to drug action and dosage or effect. It does not go into enough detail as to pharmacologic action and effect for major references. Furthermore, no references are made nor is there a

bibliography so that other articles upon which the author based his conclusions could be read. The index is complete and it is easy to locate items which in themselves are easily read.  
B. Z. H.

**CONCISE ANATOMY**, by Linden F. Edwards, Ph.D., Professor of Anatomy, The Ohio State University, Columbus, Ohio. 324 Illustrations. Philadelphia. The Blakiston Company. 1947. Price \$5.50.

This book consists of five hundred and fourteen pages written to fill a need for students in physical education particularly. It is, as the author states, "A text of descriptive and applied anatomy."

The study of the human body is made from a regional viewpoint after giving certain principles in general anatomy. The bones, muscles, articulation, blood vessels and nerves are considered individually so as to give the reader a clear picture before putting the entire function together.

After reviewing this text it is noted that it could not be used as a comprehensive anatomy for medical or dental students, but would do nicely for reviewing certain structures, either regional or individual. Secondly, it would meet the need of any group of students who need anatomic knowledge such as those in physiotherapy, occupational therapy, medical technology, and also would be helpful in the nursing and physical education fields.

To sum up the contents in the words of the author, "The basic principles of human anatomy including descriptive, microscopic, and developmental aspects are prerequisites for working knowledge of the human body."

I heartily recommend this book as a review for anyone interested in regional or topographic anatomy, and as a book suited for reference work.  
J. A. G.

**HEART AND CIRCULATION, A HISTORY OF THE**, by Fredrick A. Willius, M.D., Senior Consultant in Cardiology, Mayo Clinic; Professor of Medicine, Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota, and Thomas J. Dry, M.B., Consultant, Section on Cardiology, Mayo Clinic; Associate Professor of Medicine, Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota. Illustrated. Philadelphia. W. B. Saunders Company. 1948. Price \$8.00.

The first section of this book contains the history of the heart and circulation from circa 3000 B.C. to 1925 A.D. It covers history in antiquity through the medieval era renaissance, seventeenth, eighteenth, nineteenth and the first quarter of the twentieth centuries. In each era the author gives, as a setting the social and political status of the period, the influence of religion, the customs and beliefs of the time, and the general growth of education and its means.

The second section contains biographies of many important men in medical history. The biographies average four pages apiece and make valuable reference material.

The third section of this book lists data contained in the history in chronologic order according to subjects which cover anatomy, congenital defects, pathology, treatment, diagnosis and physiology of the heart and circulation. Under each subject the contributions and their contributors are listed in chronologic order. A succinct compendium is presented in connection with each contribution, and the location of a more complete description is given by disclosing its whereabouts in the text. This is unique in that it makes the book both an excellent reference manual and an interesting history story.

No medical library is complete without this book, and no knowledge of medicine is complete enough without knowing how that knowledge came to be.  
F. S. M.



FULL POTENTIALITIES OF THEOPHYLLINE THERAPY REALIZED...

# SYNOPHYLATE

TRADE MARK

COUNCIL



ACCEPTED

BRAND OF

THEOPHYLLINE-SODIUM GLYCINATE

**DOSAGE BARRIER REMOVED:** Theophylline dosage can now be pushed to levels which provide the optimal benefits of the medication. SYNOPHYLATE\* is well tolerated: irritative effect on the gastric mucosa is minimized. Its high degree of solubility permits prompt absorption with rapid clinical effect.

**FLEXIBILITY OF DOSAGE:** Three dosage forms of SYNOPHYLATE facilitate adaptation of the medication to the needs of the individual.

**Tablets SYNOPHYLATE:** 0.33 Gm. (5 grains), equivalent to 0.165 Gm. (2½ grains) Theophylline U.S.P.; bottles of 100, 500, and 1,000. Tablets of 0.165 Gm. (2½ grains) also available.

**Syrup SYNOPHYLATE:** Each teaspoonful (4 cc.) contains 0.33 Gm. (5 grains) SYNOPHYLATE, equivalent to 0.165 Gm. (2½ grains) Theophylline U.S.P.; bottles of 1 pt. and 1 gal.

**Suppositories SYNOPHYLATE, Rectal:** Each suppository contains 0.78 Gm. (12 grains) SYNOPHYLATE, equivalent to 0.39 Gm. (6 grains) Theophylline U.S.P.; cartons of 12 foil-wrapped suppositories.

\*Trademark of The Central Pharmacal Co.

**THE CENTRAL PHARMACAL COMPANY**

*Pharmaceutical Progress Since 1904*

SEYMOUR...



...INDIANA

# LUZIER'S SERVICE

Preparations by Luzier are selected to suit the individual's cosmetic requirements and preferences as determined by the answers to a Selection Questionnaire. They are made available to the public by Cosmetic Consultants who assist with the selection of suitable types, shades, and variations of Luzier preparations and suggest the manner of application to obtain the best results, the most desirable cosmetic effect.

Formulas may be had on written request and in specific cases, when there is a history or suspicion of allergy, materials are available for testing.

## Luzier's Fine Cosmetics and Perfumes Are Distributed in Missouri by

### CHILCUTT AND CHILCUTT, Divisional Distributors

Box 774, Jefferson City, Missouri

#### DISTRIBUTORS

**Ruth Curtwright**  
Holiday, Mo.

**Bonnie Fox**  
722 S. Jefferson  
Springfield, Mo.

**Elva Gones**  
305½ W. 4th  
Hannibal, Mo.

**Pearl Jackson**  
510 Woodlawn  
Mexico, Mo.

**Mildred B. Medsker**  
506 Main  
Rolla, Mo.

**Norma Needham**  
603 N. 6th  
St. Charles, Mo.

**Virginia Mae Perry**  
Salem, Mo.

**Amy Washington**  
West Plains, Mo.

**Elsie Whitman**  
Salem, Mo.

### ALPHA EADE, Divisional Distributor

705 Olive Street, Room 511

Phone GA 5347 St. Louis 1, Missouri

#### DISTRIBUTORS

**Mrs. Anna L. Brown**  
2317 Indiana Ave.  
St. Louis 4, Mo.  
Phone GR 2918

**Mrs. Betty H. Crain**  
5367 Gladstone  
Normandy 21, Mo.  
Phone GO 6714

**Mrs. Viola M. Dilg**  
426 Northridge  
St. Louis 15, Mo.  
Phone CO 7919

**Rose Miller**  
1121 Fullerton Bldg.  
122 N. 7th St.  
St. Louis 1, Mo.  
Phone GA 5335

**Laura B. Roberson**  
3412 Humphrey  
St. Louis 18, Mo.  
Phone LA 1833

**Mrs. Myrle C. Treanor**  
5974 Julian  
St. Louis 12, Mo.  
Phone DE 8067

### GLENNA SANDERS, Divisional Distributor

4944 Murdock St.

Phone Plateau 4442

St. Louis, Mo.

#### DISTRIBUTORS

**Blanche Becker**  
6502 Emma  
Jennings, Mo.  
Phone Mulberry 7712

# *Make Reservations Early*

## **HOTEL RESERVATIONS**

*for*

**91st Annual Session, Kansas City**

**March 27, 28, 29, 30, 1949**

*Members are requested to make reservations directly with  
the hotel of their choice.*

In case of difficulty concerning reservation, contact the Committee on Hotels: DRS. JAMES W. DOWNEY, *Chairman*; MARTIN P. HUNTER, DAVID B. MORGAN, R. C. FREDEEN, EDWARD H. KLEIN, ROBERT J. MURPHY, M. L. FRIEDMAN, ROBERT A. MOORE.

**President Hotel, 14th and Baltimore**

*(Headquarters, Missouri State Medical Association)*

Single room \$3.50 to \$5.50; double \$5.00 to \$7.50; twin bedded room \$7.00 to \$9.00.

**Muehlebach Hotel, 12th and Baltimore**

Single room \$4.00 to \$8.00; double \$6.00 to \$10.00; twin bedded room \$7.00 to \$12.00.

**Ambassador Hotel, Broadway and  
Knickerbocker**

Single room \$2.50 to \$5.00; double \$3.50 to \$7.00; twin bedded room \$4.50 to \$8.00.

**Bellerive Hotel, 214 E. Armour**

Single room \$4.50 to \$6.00; double \$6.50 to \$9.00; twin bedded room \$6.50 to \$9.00.

**Commonwealth Hotel, 11th and Baltimore**

Single room \$3.00 to \$4.00; double \$4.00 to \$6.00; twin bedded room \$4.50 to \$7.00.

**Continental Hotel, 11th and Baltimore**

Single room \$3.00 to \$5.00; double \$4.50 to \$6.00; twin bedded room \$6.00 to \$9.00.

**Phillips Hotel, 12th and Baltimore**

Single room \$3.00 to \$5.00; double \$5.00 to \$8.00; twin bedded room \$7.00 to \$8.00.

**Pickwick Hotel, 10th and McGee**

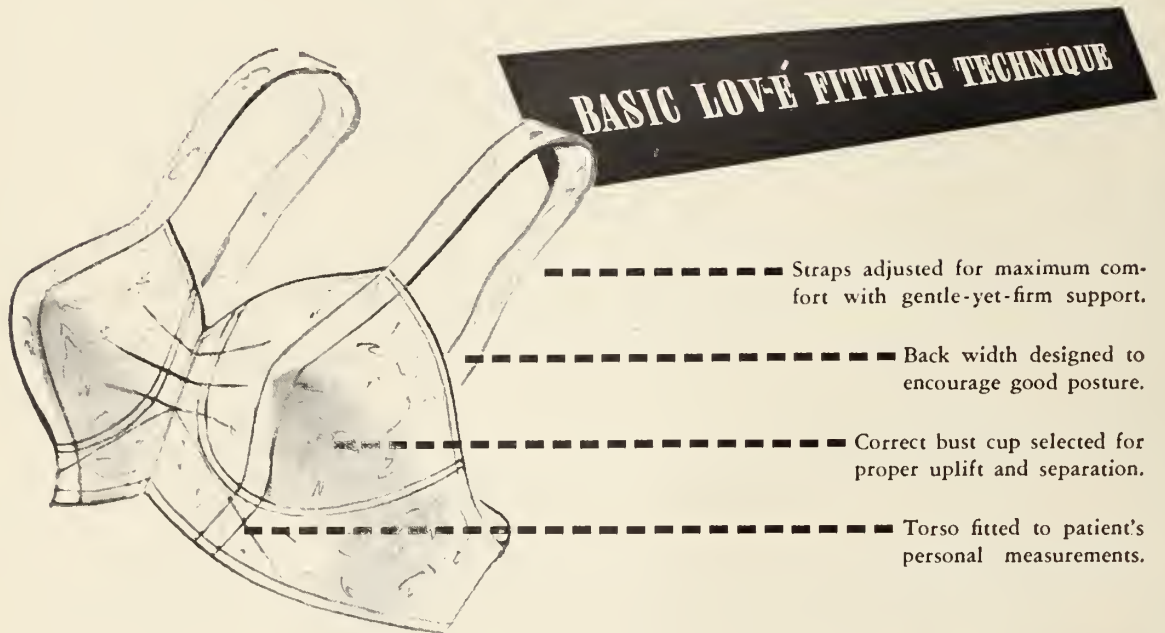
Single room \$3.25 to \$5.00; double \$4.75 to \$7.00; twin bedded room \$5.50 to \$7.00.



*an aid in treatment of specific breast conditions*

# Lov-e' CORRECTIVE BRASSIERES

*are custom-fitted to prescription...*



Proper physiological support for the breast is a medical problem, and patients are grateful to the physician who recognizes this fact. Lov-e's extensive therapeutic line of breast supports provides remedial support for specific breast conditions. From more than 500 bust-cup-torso size variations, the patient's correct size is selected, then fitted to her *individual measurements* by specially trained Lov-e' technicians, according to your exact instructions.

*Lov-e' Brassieres are available in a wide variety of all fine fabrics including cottons, rayon jacquards and nylons. Also available: sleeping brassieres, hospital binders, artificial breasts; muscle pads and maternity garter supports.*

LOV-E SECTION  
CORSET DEPARTMENT  
FAMOUS-BARR CO., ST. LOUIS

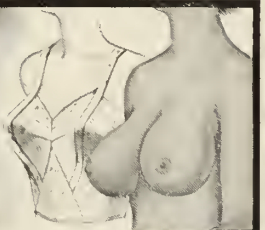
## MATERNITY

— for pre-natal and post-natal. Helps prevent leakage. Adjusted without charge during pregnancy.



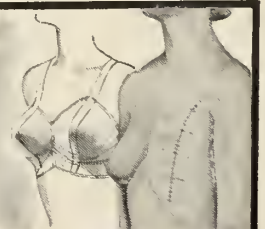
## HYPERTROPHIC

— inner pocket for pendulous bust. Built up back. Padded shoulder straps. Redistributes bust weight.



## MASTECTOMY

— fitted with Lov-e' bust pads to restore bust contour. Aids psychologically.



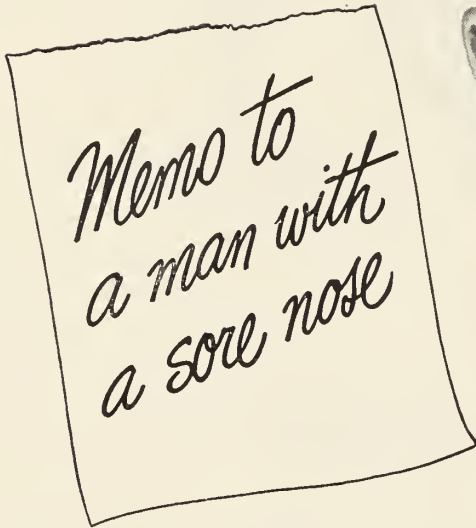


## dietary dub!

Factories throb to the pound of his inventions—while he sits. Hour after silent hour he sits and schemes mechanical schemes or times the pace of tiny models. In his spare time? Moves to a rocking chair and reads. Has no appetite? Neither do hundreds of others whose occupations or pastimes require little physical energy. And you could cite many other reasons for inadequate diets—excessive smoking, indifference, ignorance, strong likes and dislikes . . . In many such cases, your prescription for one or more vitamins accompanies your advice on dietary reform. When you prescribe an Abbott product, you are assured that your patient will receive the full potencies intended. There is an Abbott vitamin product to fill every need—for one or a combination of vitamins, for supplementary or therapeutic levels of dosage, for oral or parenteral administration. Your pharmacy will be glad to fill your prescriptions. ABBOTT LABORATORIES, NORTH CHICAGO, ILLINOIS

Specify: **ABBOTT'S**

Vitamin Products



**Congratulations, sir!** Your bandaged beak is a badge of honor!

It's a sure sign that you, like most of us these days, have been keeping your nose to the grindstone—working your hardest just to keep your family living the way you want them to live.

**But what of the future?** Your nose can't take it forever. Someday you'll want to retire, to follow the hobbies and take the trips and do the things that you've always dreamed of doing.

That's going to take just one thing—**MONEY!** And will you have it when you want it?

You will if you're buying **U. S. Savings Bonds** *automatically*—on the Payroll Savings Plan where you work, or on the Bond-A-Month Plan at your bank.

It's just about the easiest, surest, fastest way of building financial security that anyone ever dreamed up. And with U. S. Savings Bonds, you *make money* while you save it. Every \$75 Bond you buy today will be worth \$100 in just 10 years!

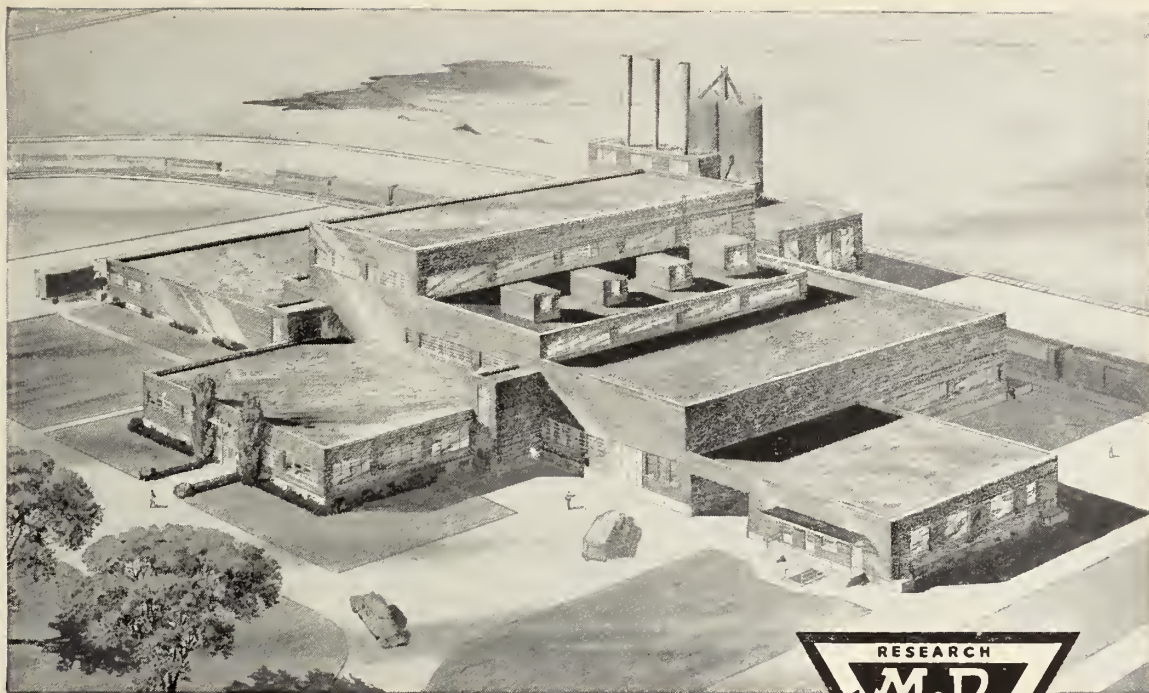
**Start buying your bonds** *automatically* now! Keep on doing it! And in no time flat, you'll find that you're well on your way to a permanent separation of nose and grindstone!

## **AUTOMATIC SAVING IS SURE SAVING—U.S. SAVINGS BONDS**



*Contributed by this magazine in co-operation with the Magazine Publishers of America as a public service.*





## No milk laboratory in the world more modern!

This is the new three and one-half million dollar Sturgis (Michigan) Similac Laboratory. This additional capacity was made necessary by your confidence in Similac, and your increasing use of the product in your infant feeding practice.

The years of basic and clinical research which preceded the introduction of Similac, established with us a *habit* for

research. And the many years of acceptance which Similac has enjoyed *since* its introduction, make us fully conscious that continuing research is an obligation.

In our present resources to fulfill this obligation we take a pardonable pride.

But our *greatest* pride will continue to be the high esteem in which Similac is held by Doctors everywhere.

M & R DIETETIC LABORATORIES, INC. • COLUMBUS 16, OHIO



**SIMILAC**... *Similar to breast milk*

*Over 37 Years ...  
Builders and Fitters of  
Artificial Limbs and  
Orthopaedic Appliances*

Isle Built Appliances restore the highest possible degree of efficiency to patients who have suffered amputation or other physical impairment.

Your instructions followed implicitly.  
Qualified, courteous personnel.

ENTIRE SECOND FLOOR    PHONE VICTOR 2350

**THE W. E. ISLE COMPANY**  
1121 GRAND AVE. KANSAS CITY, MO.

## Mullen Ambulance Company

PRIVATE AMBULANCE  
SERVICE

*Local and Distant Trips  
Day or Night*

5159 Delmar, St. Louis

Forest 1913

The Neurological Hospital,  
2625 The Paseo, Kansas City,  
Missouri. Operated by the Rob-  
inson Clinic, for the care and  
treatment of nervous and men-  
tal patients and associated  
conditions.

## FAITH HOSPITAL

A. J. Signorelli, M.D., *Medical Director*

**2800 N. Taylor      St. Louis, Mo.**

Goodfellow 6262

## The Norbury Sanatorium

Established 1901—Incorporated—  
Licensed—Jacksonville, Illinois

• ALBERT H. DOLLEAR, B. S., M. D., Superintendent.  
FRANK GARM NORBURY, A. M., M. D., Medical  
Director. SAMUEL N. CLARK, M.D., Physician. HENRY  
A. DOLLEAR, M.D., Associate Physician.



### Maplecrest

• Pictured above — Restful, congenial home-like surroundings are combined with the most modern diagnostic and therapeutic equipment.



### Maplewood

• Pictured at left — Most comfortable homes for individuals requiring rest, scientific diagnosis and treatment. Fireproof construction.



**The  
\$64.00  
Question**

How much longer do you expect to practice?

Might it be 10, 15 or 20 years?

Will you average \$750 a month—\$9,000 a year gross income?

Will your aggregate income amount to \$90,000 — \$135,000 or \$180,000 or more?

These are Incomes worth Insuring!  
**CAN YOU** insure your Income for 20 years?

**YES!** You can insure against loss of Income up to 80%  
for 1 year or for 20 years or **EVEN FOR LIFE—**

Against Accidental Death, Loss of Hands, Feet or Eyes,  
Total Disability—Loss of Time due to Accident or Sickness.

**CONTINENTAL'S COMPANION POLICIES, Provide—**

1. Hospital Benefits of \$20 per day plus
2. Accident and Confining Sick Benefits of \$400 a month
3. Total Permanent Disability Benefits of \$300 a month
4. Dismemberment Benefits of \$5,000 and \$300 a month for Life
5. Accidental Death Benefits of \$7,500—Travel Acc'd \$12,500

**SPECIAL FEATURES**

No Cancellation Clause, *Standard Provision 16*  
No Terminating Age, *Standard Provision 20*  
No Increase in Premium, *Once Policy Is Issued*

Non Pro-Rating  
Non-Assessable  
Non-Aggregate

Grace Period 15 Days

**OUTSTANDING FEATURES**

- ★ Provides Monthly Benefits from 1st Day to Life.
- ★ Provides Benefits for both Sickness and Accident.
- ★ Provides Lifetime Benefits for Time or Specific Losses.
- ★ Provides Regular Benefits for Commercial Air Travel.
- ★ Provides Benefits for Non-Disabling Injuries.
- ★ Provides Benefits for Non-Confining Sickness.
- ★ Provides Benefits for Septic Infections.
- ★ Provides Whether or not Disability is Immediate.
- ★ Waives Premiums for Total Permanent Disability.
- ★ Guaranteed Renewable Features and no Terminating Age.

**CONTINENTAL CASUALTY COMPANY**

PROFESSIONAL GROUP DEPT., *Intermediate Division*

**30 EAST ADAMS STREET—SUITE 1100—CHICAGO 3, ILLINOIS**

**ALSO ATTRACTIVE  
HEALTH WITH  
LIFETIME ACCIDENT  
PLAN  
FOR AGES 59 TO 75**

Name .....  
ADDRESS .....  
AGE .....



## AT HOME OR AWAY **SPOT TESTS** SIMPLIFY URINALYSIS

**No Test Tubes • No Measuring • No Boiling**

Diabetics welcome "Spot Tests" (ready to use dry reagents), because of the ease and simplicity in using. No test tubes, no boiling, no measuring; just a little powder, a little urine—color reaction occurs at once if sugar or acetone is present.

### *Galatest... Acetone Test* (DENCO)

FOR DETECTION OF  
SUGAR IN THE URINE

FOR DETECTION OF  
ACETONE IN THE URINE

#### SAME SIMPLE TECHNIQUE FOR BOTH

1. A LITTLE POWDER

2. A LITTLE URINE



COLOR REACTION IMMEDIATELY

A carrying case containing one vial of Acetone Test (Denco) and one vial of Galatest is now available. This is very convenient for the medical bag or for the diabetic patient. The case also contains a medicine dropper and a Galatest color chart. This handy kit or refills of Acetone Test (Denco) and Galatest are obtainable at all prescription pharmacies and surgical supply houses.

Accepted for advertising in the *Journal of the A.M.A.*

WRITE FOR DESCRIPTIVE LITERATURE

*Acetone Test* (DENCO) ... *Galatest*  
**The Denver Chemical Manufacturing Co., Inc.**

163 Varick Street, New York 13, N. Y.

*All worth while laboratory examinations; including—*

Tissue Diagnosis

The Wassermann and Kahn Tests

Blood Chemistry

Bacteriology and Clinical Pathology

X-Ray including Gastro-Intestinal Study and Gall Bladder Visualization

Basal Metabolism

Pregnancy Test

Electrocardiograms with interpretation

## National Pathological Laboratory

RALPH L. THOMPSON, M.D., Director

601-616 University Club Bldg.

ST. LOUIS

Telephone JEFFerson 6088

This Laboratory is approved by the Council on Medical Education and Hospitals of the American Medical Association

## Cook County Graduate School of Medicine (IN AFFILIATION WITH COOK COUNTY HOSPITAL)

*Incorporated not for profit*

### Announces Continuous Courses

**SURGERY**—Intensive Course in Surgical Technique, two weeks, starting January 24, February 21. Surgical Technique, Surgical Anatomy & Clinical Surgery, four weeks, starting February 7, March 7.

Surgical Anatomy & Clinical Surgery, two weeks, starting February 21, March 21.

Surgery of Colon & Rectum, one week, starting March 7, April 11.

Surgical Pathology every two weeks.

**GYNECOLOGY**—Intensive Course, two weeks, starting February 21, March 21.

Vaginal Approach to Pelvic Surgery, one week, starting February 14.

**OBSTETRICS**—Intensive Course, two weeks, starting March 7.

**MEDICINE**—Intensive Course, two weeks, starting April 4.

Personal Course in Gastroscopy, two weeks starting March 7.

**PEDIATRICS**—Intensive Course, four weeks starting April 4.

**DERMATOLOGY**—Formal Course, two weeks, starting April 18.

Clinical Course every two weeks.

**CYSTOSCOPY**—Ten Day Practical Course every two weeks.

**ROENTGENOLOGY**—Lecture & Diagnostic Course, two weeks, starting the first Monday of every month.

Clinical Course starting third Monday of every month.

GENERAL, INTENSIVE AND SPECIAL COURSES IN ALL BRANCHES OF MEDICINE, SURGERY AND THE SPECIALTIES.

Teaching Faculty—Attending Staff, Cook County Hospital  
Registrar, 427 South Honore St., Chicago 12, Ill.

## ACCIDENT • HOSPITAL • SICKNESS

# INSURANCE

FOR PHYSICIANS, SURGEONS, DENTISTS EXCLUSIVELY



<b>\$5,000.00 accidental death</b>	<b>\$ 8.00</b>
\$25.00 weekly indemnity, accident and sickness	quarterly
<b>\$10,000.00 accidental death</b>	<b>\$16.00</b>
\$50.00 weekly indemnity, accident and sickness	quarterly
<b>\$15,000.00 accidental death</b>	<b>\$24.00</b>
\$75.00 weekly indemnity, accident and sickness	quarterly
<b>\$20,000.00 accidental death</b>	<b>\$32.00</b>
\$100.00 weekly indemnity, accident and sickness	quarterly

Also Hospital Expense for Members  
Wives and Children

85c out of each \$1.00 gross income used for members' benefit

INVESTED ASSETS **\$3,000,000.00** PAID FOR CLAIMS **\$15,000,000.00**

\$200,000.00 deposited with State of Nebraska for protection of our members.

Disability need not be incurred in line of duty—benefits from the beginning day of disability

## PHYSICIANS CASUALTY ASSOCIATION PHYSICIANS HEALTH ASSOCIATION

46 years under the same management

400 First National Bank Building, OMAHA 2, NEBRASKA

*Your* **LABORATORIES**  
*Our* **Responsibility**

**CLINICAL PATHOLOGY  
PATHOLOGIC ANATOMY**

**DUNCAN LABORATORIES**

*Established 1921*

**909 Argyle Building • • Kansas City 6, Mo.**

**230 Frisco Building • • Joplin, Missouri**

**RALPH EMERSON DUNCAN, M. D.**

**MAURICE L. JONES, M.D.**

In addition to diagnostic laboratory services, chemically accurate and clinically tested reagents, solutions, stains and culture media are available for immediate delivery.

## COMMERCIAL ANNOUNCEMENT

**FOR SALE:** Kelley Koett X-ray equipment; horizontal radiographic fluoroscopic Bucky table; vertical fluoroscope, X-ray tubes; guaranteed perfect operating condition; rare bargain. Address C. E. Gilliland, M.D., 7270 Natural Bridge Rd., St. Louis, Mo.

**FOR SALE:** Electric bone saw and drill outfit and traction apparatus of deceased surgeon's office. Address Miss Bette L. Smither, 1010 Professional Bldg., Kansas City, Mo.

### THE STOKES SANITARIUM

923 Cherokee Road,  
Louisville, Kentucky  
Our ALCOHOLIC treatment destroys the craving, restores the appetite and sleep, and rebuilds the physical and nervous condition of the patient. Liquors withdrawn gradually; no limit on the amount necessary to prevent or relieve delirium.

MENTAL patients have every comfort that their home affords.

The DRUG treatment is one of gradual Reduction. It relieves the constipation, restores the appetite and sleep; withdrawal pains are absent. No Hyoscine or rapid withdrawal methods used.

NERVOUS patients are accepted by us for observation and diagnosis as well as treatment.

E. W. STOKES, Medical Director. Established 1904  
Telephone—Highland 2101

Hair Permanently Removed by Electrolysis

**DOROTHY WORRELL, R.N.**

233 N. Vandeventer, St. Louis

Telephone, Jefferson 9436

*Work Done on Prescription of Physicians Only*

Buy  
U. S. Saving  
Bonds

**LABORATORY C&B REAGENTS**

Inorganic and Organic Chemicals  
Biological Stains • Solutions  
Chemical Indicators • Test Papers

*Distributed by  
Physician and Laboratory Supply Houses*

**The COLEMAN & BELL COMPANY, Inc.**  
MANUFACTURING CHEMISTS NORWOOD, OHIO, U.S.A.

**COLEMAN & BELL** Norwood, Ohio

## INDEX TO ADVERTISERS

Abbott Laboratories .....	63
Aloe, A. S. Company .....	10
American Meat Institute .....	52
Arlington Chemical Co. ....	37
Association of Internal Secretions .....	41
Ayerst, McKenna & Harrison, Ltd. ....	51
Camel Cigarettes .....	9
Camp, S. H., & Co. ....	4
Central Pharmacal Co. ....	59
Chicago Medical Society .....	47
Ciba Pharmaceutical Products, Inc. ....	39
Coca-Cola Company .....	37
Coleman & Bell Co. ....	70
Continental Casualty Co. ....	67
Cook County Graduate School of Medicine.....	68
Denver Chemical Mfg. Co., Inc. ....	68
Duncan Laboratories .....	69
Faith Hospital .....	66
Fleet, C. B., Co., Inc. ....	49
Glenwood Sanatorium .....	71
Gradwohl Laboratories .....	12
Hamilton Schmidt .....	16
Hanger, J. E., Inc. ....	12
Holland-Rantos Co. ....	13
Isle, W. E., Co. ....	66
Lilly, Eli & Co. ....	Insert
Lov-e Brassiere Co. ....	62
Luzier's, Inc. ....	60
M & R Dietetic Laboratories, Inc. ....	65
Major Clinic .....	5
Massachusetts Indemnity Insurance Co. ....	71
Mead Johnson & Co. ....	72
Medical Protective Co. ....	16
Merck & Co., Inc. ....	55
Mid-South Post Graduate Medical Assembly.....	35
Milwaukee Sanitarium .....	47
Mullen Ambulance .....	66
National Pathological Laboratories .....	68
Norbury Sanatorium .....	66
North Shore Health Resort .....	12
Parke, Davis & Co. ....	2, 3
Philip Morris & Co. ....	15
Physicians Casualty Assn. ....	68
Pogue, Mary E., School .....	71
Producers Creamery Co. ....	57
Quincy X-Ray & Radium Laboratories.....	16
Ralph Sanitarium .....	14
Robinson Clinic, Inc. ....	66
Schering Corporation .....	45
Searle, G. D., & Co. ....	33
Stokes Sanitarium .....	70
U. S. Brewers Foundation, Inc. ....	57
U. S. Savings Bond .....	64
Wallace Sanitarium .....	10
White Laboratories, Inc. ....	Insert
Winthrop Stearns, Inc. ....	7
Worrell, Dorothy .....	70
Wyeth, Inc. ....	11
Zemmer Company .....	16





## The Mary E. Pogue School

Complete facilities for training Retarded and Epileptic children educationally and socially. Pupils per teacher strictly limited. Excellent educational, physical and occupational therapy programs.

Recreational facilities include riding, group games, selected movies under competent supervision of skilled personnel.

Catalogue on request.

G. H. Marquardt, M.D.    Barclay J. MacGregor  
Medical Director                      Registrar

27 Geneva Road, Wheaton, Illinois  
(Near Chicago)

## Massachusetts Indemnity *Proudly Presents*

A new series of improved catastrophe type

noncancellable, incontestable disability policies

Guaranteed renewable to 60 or 65—as you select

including PENSION-FOR-LIFE FOR BLINDNESS

### C. E. HOVEY

GENERAL AGENT

SAINT LOUIS



One of Four Main Buildings

## GLENWOOD SANATORIUM

A Private Hospital for Care of Nervous and Mental Disorders, Alcohol and Narcotic Addictions.

Thoroughly equipped for all the approved therapeutic measures. Insulin, metrazol and electro shock used in selected cases.

Four main buildings for patients permit ample classification facilities. Large grounds composed of about fifty acres make many out-of-door activities possible.

Phone WEBster 1056

Visiting Consultant  
W. W. Graves, M.D.


Visiting Neuropsychiatrist  
Sydney B. Maughs, M.D.

Medical Superintendent  
Paul Hines, M.D.

Resident Physicians  
Richard J. Hessberg, M.D.  
LeRoy J. Dierker, M.D.

For full information, address

Paul Hines, M.D., Medical Superintendent, Webster Groves, St. Louis, 19, Mo.



This baby's mother learned about Mead's Oleum Percomorphum from her physician, not from public advertising or displays.

*"Servamus Fidem"*

## HOW much sun does the infant really get?

*Not very much:* (1) When the baby is bundled to protect against weather or (2) when shaded to protect against glare or (3) when the sun does not shine for days at a time. Mead's Oleum Percomorphum is a prophylactic against rickets available 365 $\frac{1}{4}$  days in the year, in measurable potency and in controllable dosage. *Use the sun, too.*

Mead Johnson & Co., Evansville, Ind., U.S.A.



THE  
**JOURNAL**  
*of the*  
MISSOURI STATE MEDICAL ASSOCIATION

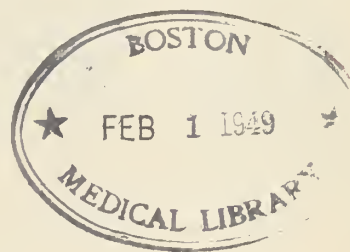
VOLUME 46  
NUMBER 2

FEBRUARY, 1949

SINGLE COPY, 40 CENTS  
PER YEAR, \$3.00

ORIGINAL ARTICLES

Allergy Problems  
Coronary Heart Disease  
Pitressin Test  
Roentgen Therapy



EDITORIALS

Annual Session  
Average Age of Physicians Declines

(Contents Index Page 77)

ANNUAL SESSION, MARCH 27-30, 1949



the exceptional  
qualifications  
of

**THEELIN**

for

estrogen  
therapy



PARKE, DAVIS

# The first estrogen

isolated in pure crystalline form—and still the standard of reference for measuring estrogen activity—THEELIN has been a stand-by for over two decades. Its effectiveness in controlling symptoms and signs of the menopause and other estrogen-deficient states is attested to by hundreds of published reports. The notable freedom from undesirable side effects of this naturally occurring estrogenic hormone has long been familiar to physicians everywhere.

**THEELIN's** dose-for-dose uniformity is assured by chemical determination of identity and purity, and standardization by weight. The variety of clinically convenient dosage forms permits individualized treatment schedules.

---

**THEELIN AQUEOUS SUSPENSION** 1-cc. ampoules of 1 mg. (10,000 I.U.), 2 mg. (20,000 I.U.), and 5 mg. (50,000 I.U.).

**THEELIN IN OIL** 1-cc ampoules of 0.1 mg. (1000 I.U.), 0.2 mg. (2000 I.U.), 0.5 mg. (5000 I.U.) and 1 mg. (10,000 I.U.).

**THEELIN STERI-VIALS® IN OIL**, vials of 10 cc., 1 mg. (10,000 I.U.) per cc.

COMPANY • DETROIT 32, MICHIGAN

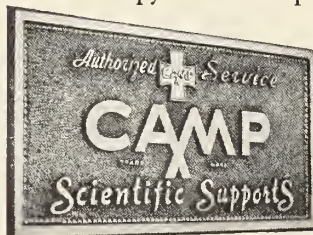




*Consistent Research Makes Scientific Design Basic In*

## **CAMP SCIENTIFIC SUPPORTS**

For many decades it has been our privilege to work closely with physicians and surgeons in the design, improvement and manufacture of anatomical supports to meet the needs of their patients. The unique Camp adjustment feature insures proper firmness about the pelvis and controlled support of the abdomen, spinal column and gluteal region without compression. Write for your copy of the Camp "Reference Book for Physicians and Surgeons."



*THIS EMBLEM is displayed only by reliable merchants in your community. Camp Scientific Supports are never sold by door-to-door canvassers. Prices are based on intrinsic value. Regular technical and ethical training of CAMP fitters insures precise and conscientious attention to your recommendations.*

S. H. CAMP and COMPANY, Jackson, Michigan  
*World's Largest Manufacturers of Scientific Supports*  
 Offices in New York • Chicago • Windsor, Ontario • London, England



# CONTENTS

Allergy Problems. Herbert J. Rinkel, M.D., Kansas City, Mo. ....	91	Average Age of Physicians Declines.....	115
Coronary Heart Disease. A. M. Estes, M.D., Jackson, Mo. ....	99	News Notes .....	115
Pitressin Test. Michael Bernreiter, M.D., Kansas City, Mo. ....	102	Musings of the Field Secretary.....	116
Roentgen Therapy. David S. Dann, M.D., Kansas City .....	108	Deaths .....	116
President's Page .....	112	Organization Activities .....	116
Editorials—		Society Proceedings .....	120
Annual Session .....	115	Roster of Members by County Society.....	122
		Book Reviews .....	145
		Commercial Announcement .....	154

Entered as Second-Class Matter, February 18, 1925, at the Post Office at Fulton, Mo., under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1003, Act of October 3, 1917, authorized July 30, 1918. Business Office, 1201-5 Bluff St., Fulton, Mo., and 623 Missouri Building, St. Louis, Mo., Editorial Office, 623 Missouri Building, St. Louis, Mo. Return postage guaranteed. Printed by The Ovid Bell Press, Inc., Fulton, Mo.

## THE MAJOR CLINIC ASSOCIATION

3100 Euclid Avenue, Kansas City, Missouri

A Well  
Equipped  
Institution  
for the  
Treatment of  
Nervous and  
Mental  
Diseases and  
Alcohol,  
Drug and  
Tobacco  
Addictions



Beautiful  
Location  
Large, Well  
Shaded  
Grounds,  
Spacious  
Porches,  
All Modern  
Methods for  
Restoring  
Patients to a  
Normal  
Condition

**HERMON S. MAJOR, M.D.**  
Medical Director

**HERMON S. MAJOR, JR.**  
Business Manager

**AMERICAN MEDICAL ASSOCIATION**

President, Roscoe L. Sensenich, South Bend, Ind.

President-Elect, Ernest Edward Irons, Chicago.

**Annual Session, Atlantic City, June 6-10, 1949****MISSOURI STATE MEDICAL ASSOCIATION****91st Annual Session, Kansas City, March 27-30, 1949**

President, Robert Mueller, St. Louis.

President-Elect, Wallis Smith, Springfield.

Vice Presidents, B. E. DeTar, Joplin; D. P. Dyer, Sedalia; P. W. Jennings, Canton.

Speaker, Ralph E. Duncan, Kansas City; Vice Speaker, F. T. H'Doubler, Springfield.

Treasurer, C. E. Hyndman, St. Louis.

Secretary, W. A. Bloom, Fayette.

Editor, G. V. Stryker, St. Louis.

Secretary-Editor Emeritus, R. L. Thompson, St. Louis.

Field Secretary, Raymond McIntyre, St. Louis.

Assistant Editor-Business Manager, Helen Penn, St. Louis.

Executive Secretary, Tom R. O'Brien, 623 Missouri Bldg., St. Louis.

**Delegates to the American Medical Association**

W. L. Allee, Eldon, 1948-1950; alternate, Paul Baldwin, Kennett. Howard B. Goodrich, Hannibal, 1948-1950; alternate, H. L. Mantz, Kansas City. James R. McVay, Kansas City, 1947-1949; alternate, A. J. Campbell, Sedalia. R. E. Schlueter, St. Louis, 1947-1949; alternate, F. G. Pernoud, St. Louis.

**Standing Committees**

**Scientific Work**—W. A. Bloom, Fayette, Chairman; A. N. Arneson, St. Louis (1951); Rex L. Diveley, Kansas City (1949). Associate Members—Victor B. Buhler, Kansas City; W. J. Stewart, Columbia; Raymond O. Muether, St. Louis.

**Postgraduate Course**—Raymond O. Muether, St. Louis, Chairman (1951); Edward Massie, St. Louis (1951); Guy D. Callaway, Springfield (1950); M. Pinson Neal, Columbia (1949); Hubert Parker, Kansas City (1949).

**Publication**—G. V. Stryker, St. Louis, Chairman; V. T. Williams, Kansas City; David V. Lemone, Columbia; H. E. Petersen, St. Joseph; Fred R. Farthing, Springfield.

**Public Policy and Public Relations**—Arie C. Van Ravenswaay, Boonville, Chairman (1950); F. R. Crouch, Farmington (1951); Armand D. Fries, St. Louis (1949); Howard B. Goodrich, Hannibal (1951); John Growdon, Kansas City (1950). Associate Member—Cyril W. Schumacher, St. Louis.

**Defense**—Charles E. Hyndman, St. Louis, Chairman (1951); Roland S. Kieffer, St. Louis (1950); L. F. Heimbürger, Springfield (1950); O. B. Zeinert, St. Louis (1949); L. F. Forgrave, St. Joseph (1949).

**Medical Education and Hospitals**—Dudley S. Conley, Columbia, Chairman (1949); John S. Knight, Kansas City (1951); V. V. Wood, St. Louis (1950); F. T. H'Doubler, Springfield (1950); F. L. Kneibert, Poplar Bluff (1949).

**Cancer**—E. C. Ernst, St. Louis, Chairman (1950); E. Kip Robinson, Kansas City (1951); Everett Sugarbaker, Jefferson City (1951); William E. Leighton, St. Louis (1949); Paul F. Cole, Springfield (1949).

**Medical Economics**—Carl F. Vohs, St. Louis, Chairman (1950); Morris S. Harless, Kansas City (1951); C. T. Herbert, Cape Girardeau (1951); George A. Aiken, Marshall (1949); W. A. Bloom, Fayette (1949).

**Mental Health**—E. F. Hoctor, Farmington, Chairman (1951); Paul Hines, St. Louis (1950); Orr Mullinax, Jefferson City (1950); B. Landis Elliott, Kansas City (1949); Frank M. Grogan, St. Louis (1949).

**Maternal Welfare**—E. Lee Dorsett, St. Louis, Chairman (1949); J. L. Johnston, Springfield (1951); E. E. Wadlow, St. Joseph (1950); J. Milton Singleton, Kansas City (1950); Paul F. Fletcher, St. Louis (1949).

**Infant Care**—G. V. Herrman, Kansas City, Chairman (1951); Eugene Schwartz, Springfield (1951); H. E. Petersen, St. Joseph (1950); Peter G. Danis, St. Louis (1949); Park J. White, St. Louis (1949). Associate Member—Joseph C. Jaudon, St. Louis.

**Health and Public Instruction (McAlester Foundation)**—A. W. McAlester, III, Kansas City, Chairman (1950); M. K. Underwood, Rolla (1951); B. E. DeTar, Joplin (1951); Joseph Conrad, Chillicothe (1950); Grayson Carroll, St. Louis (1949).

**Constitution and By-Laws**—B. Landis Elliott, Kansas City, Chairman (1950); J. H. Summers, Lebanon (1951); John J. Hammond, St. Louis (1950); S. R. McCracken, Excelsior Springs (1949).

Year indicates expiration of term.

**Fractures**—Daniel L. Yancey, Springfield, Chairman (1949); W. J. Stewart, Columbia (1951); N. S. Pickard, Kansas City (1951); W. R. Bohne, St. Louis (1950); J. Albert Key, St. Louis (1950). Associate Members—Jacob Kulowski, St. Joseph; B. L. Murphy, Hannibal.

**Conservation of Eyesight**—C. Souter Smith, Springfield, Chairman (1949); Robert Mattis, St. Louis (1951); A. N. Lemoine, Kansas City (1950); C. P. Dyer, St. Louis (1950); Robert S. Minton, St. Joseph (1949). Associate Members—Winfred L. Post, Joplin; Philip Luedde, St. Louis; John McLeod, Kansas City; G. J. Tygett, Cape Girardeau; S. L. Freeman, Kirksville; H. B. Stauffer, Jefferson City; S. Albert Hanser, St. Louis; Anton J. Hummel, St. Louis.

**Control of Venereal Disease**—A. W. Neilson, St. Louis, Chairman (1949); W. S. Sewell, Springfield (1951); Charles Greenberg, St. Joseph (1950); Hugh L. Dwyer, Kansas City (1950).

**Industrial Health**—V. T. Williams, Kansas City, Chairman (1951); Horace F. Flanders, Kansas City (1951); E. M. Fessenden, St. Louis (1950); A. M. Ziegler, Kansas City (1949); Charles R. McAdam, St. Louis (1949). Associate Members—Richard A. Sutter, St. Louis; H. M. Roebber, Bonne Terre.

**Anesthesiology**—Joseph McNearney, St. Louis, Chairman; O. T. Blanke, Joplin; J. J. Merz, St. Louis; Peter DeMaria, Kansas City; Charles White, Kansas City.

**Special Committees**

**Physical Medicine**—F. H. Ewerhardt, St. Louis, Chairman (1950); F. Garrett Pipkin, Kansas City (1951); Emmett Settle, Rock Port (1950); A. J. Kotkis, St. Louis (1949); John L. Washburn, Versailles (1949).

**Tuberculosis**—E. E. Glenn, Springfield, Chairman; A. C. Henske, St. Louis; Lawrence E. Wood, Kansas City; J. L. Mudd, St. Louis; Paul Murphy, St. Louis; C. A. Brashear, Mt. Vernon; Wilbur P. McDonald, St. Joseph; I. J. Flance, St. Louis; Florence E. MacInnis, Kansas City.

**Study of Cardiac Diseases**—A. Graham Asher, Kansas City, Chairman (1949); Drew Luten, St. Louis (1951); A. M. Estes, Jackson (1951); Julius Jensen, St. Louis (1950); Horace W. Carle, St. Joseph (1949). Associate Members—J. William Fleming, Jr., Moberly; Glen W. Hendren, Liberty; C. Braxton Davis, Nevada; Arthur Strauss, St. Louis.

**Rural Medical Service**—R. W. Kennedy, Marshall, Chairman; E. C. Bohrer, West Plains; Paul Baldwin, Kennett; H. E. Petersen, St. Joseph; Wallis Smith, Springfield. W. A. Bloom, Fayette; W. F. Francka, Hannibal; J. F. Jolley, Mexico; A. L. Hensen, Appleton City; George W. Newman, Cassville; A. S. Bristow, Princeton.

**COUNCILOR DISTRICTS AND COUNTIES IN EACH DISTRICT\***

J. W. THOMPSON, St. Louis, Chairman

E. C. BOHRER, West Plains, Vice Chairman

**First District:** Councilor, H. E. Petersen, St. Joseph. Counties: Andrew, Atchison, Buchanan, Caldwell, Carroll, Clay, Clinton, Daviess, De Kalb, Gentry, Grundy, Harrison, Holt, Livingston, Mercer, Nodaway, Platte, Ray, Worth.

**Second District:** Councilor, W. F. Francka, Hannibal. Counties: Adair, Chariton, Clark, Knox, Lewis, Linn, Macon, Marion, Monroe, Pike, Putnam, Ralls, Randolph, Schuyler, Scotland, Shelby, Sullivan.

**Third District:** Councilor, J. William Thompson, St. Louis. St. Louis City.

**Fourth District:** Councilor, Otto W. Koch, Clayton. Counties: Franklin, Jefferson, Lincoln, St. Charles, St. Louis County, Warren.

**Fifth District:** Councilor, J. F. Jolley, Mexico. Counties: Audrain, Boone, Callaway, Camden, Cole, Cooper, Gasconade, Howard, Maries, Miller, Moniteau, Montgomery, Morgan, Osage.

**Sixth District:** Councilor, R. W. Kennedy, Marshall. Counties: Bates, Benton, Cass, Cedar, Henry, Johnson, Lafayette, Pettis, St. Clair, Saline, Vernon.

**Seventh District:** Councilor, Edgar C. Virden, Kansas City. County: Jackson.

**Eighth District:** Councilor, W. S. Sewell, Springfield. Counties: Barry, Barton, Christian, Dade, Dallas, Greene, Hickory, Jasper, Lawrence, McDonald, Newton, Polk, Stone, Taney, Webster.

**Ninth District:** Councilor, Eldon C. Bohrer, West Plains. Counties: Carter, Crawford, Dent, Douglas, Howell, Laclede, Oregon, Ozark, Phelps, Pulaski, Ripley, Shannon, Texas, Wright.

**Tenth District:** Councilor, Frank W. Hall, Cape Girardeau. Counties: Bollinger, Butler, Cape Girardeau, Dunklin, Iron, Madison, Mississippi, New Madrid, Pemiscott, Perry, Reynolds, St. Francois, Ste. Genevieve, Scott, Stoddard, Washington, Wayne.

Counties in italics are not organized.





**one  
preparation  
... for one**



**or one hundred patients**

It is possible to limit your choice of estrogenic substances to one preparation—AMNIOTIN—and still meet the greatly varying needs of all your menopausal patients.

AMNIOTIN is the *ONLY* complex of naturally occurring mixed estrogens for use by three routes: intramuscular, oral, and intravaginal. Its great range of potency and flexibility of administration enables you to individualize the therapy for each and every patient with a single preparation.

**SQUIBB**

**AMNIOTIN<sup>®</sup>**

SQUIBB complex of naturally occurring estrogens

Ampuls and Vials

Capsules (oral)

Pessaries (capsule type)



# County Societies in Affiliation with the Missouri State Medical Association

COUNTY	DISTRICT	PRESIDENT	ADDRESS	SECRETARY	ADDRESS
Andrew	1	V. R. Wilson	Rosendale	M. L. Holliday	Fillmore
Audrain	5	Glen P. Kallenbach	Mexico	Fred Griffin	Mexico
Barton-Dade	8	Rudolf Knapp	Golden City	Vern T. Bickel	Lamar
Bates	6	A. G. Wooldridge	Butler	John M. Cooper	Butler
Benton	6	T. S. Reser	Cole Camp	James A. Logan	Warsaw
Boone	5	James Baker	Columbia	Helen Yeager	Columbia
Buchanan	1	H. E. Petersen	St. Joseph	Joseph L. Fisher	St. Joseph
Butler	10	Fred J. Biggs	Poplar Bluff	Frank E. Dinelli	Poplar Bluff
Caldwell-Livingston	1	Donald M. Dowell	Chillicothe	Joseph E. Gale	Chillicothe
Callaway	5	Henry Durst	Fulton	R. N. Crews	Fulton
Camden	5	E. G. Claiborne	Camdenton	G. T. Myers	Macks Creek
Cape Girardeau	10	W. F. Oehler	Cape Girardeau	Charles F. Wilson	Cape Girardeau
Carroll	1	W. G. Atwood	Carrollton	John H. Platz	Carrollton
Carter-Shannon	9	F. Hyde	Eminence	W. T. Eudy	Eminence
Cass	6	Herbert A. Tracy	Belton	O. B. Barger	Harrisonville
Chariton-Macon-Monroe-Randolph	2	D. E. Eggleston	Macon	Henry K. Baker	Moberly
Clay	1	W. H. Goodson	Liberty	S. R. McCracken	Excelsior Springs
Clinton	1	S. D. Reynolds	Plattsburg	Wilber G. Spalding	Plattsburg
Cole	5	H. M. Wiley	Jefferson City	James T. Leslie, Jr.	Jefferson City
Cooper	5	Arie C. Van Ravenswaay	Boonville	J. C. Tinker	Boonville
Dallas Hickory-Polk	8	C. H. Barnett	Bolivar	John R. O'Brien	Bolivar
De Kalb	1			W. S. Gale	Osborn
Dunklin	10	J. C. Cofer	Kennett	E. L. Spence	Kennett
Franklin	4	Herbert H. Schmidt	Marthasville	F. G. Mays	Washington
Greene	8	A. Denton Vail	Springfield	Kenneth C. Coffelt	Springfield
Grundy-Daviess	1	Joseph M. Quisito	Trenton	E. A. Duffy	Trenton
Harrison	1	W. A. Broyles	Bethany	L. J. Bunting	Bethany
Henry	6	S. B. Hughes	Clinton	R. S. Hollingsworth	Clinton
Holt	1	F. E. Hogan	Mound City	D. C. Perry	Mound City
Howard	5	Morris Leech	Fayette	Francis D. Dean	Fayette
Jackson	7	A. N. Altringer	Kansas City	Kenneth E. Cox	Kansas City
Jasper	8	S. W. Scorse	Joplin	R. M. Ferguson	Webb City
Jefferson	4	Karl V. McKinstry	DeSoto	George Hopson	DeSoto
Johnson	6	O. H. Damron	Warrensburg	Reed T. Maxson	Warrensburg
Laclede	9	H. W. Carrington	Lebanon	B. B. Hurst	Lebanon
Lafayette	6	Douglas Kelling	Waverly	Jordan Kelling	Waverly
Lewis-Clark-Scotland	2	J. R. Bridges	Kahoka	P. W. Jennings	Canton
Lincoln	4	H. S. Harris	Troy	J. C. Creech	Troy
Linn	2	Roy R. Haley	Brookfield	J. R. Dixon	Brookfield
Marion-Ralls	2	W. J. Smith	Hannibal	Harry L. Greene	Hannibal
Mercer	1	T. S. Duff	Cainsville	J. M. Perry	Princeton
Miller	5	G. D. Walker	Eldon	Carl T. Buehler, Jr.	Eldon
Mississippi	10	G. W. Whitaker	East Prairie	E. C. Rolwing	Charleston
Moniteau	5	J. P. Burke, Jr.	California	K. S. Latham	California
Montgomery	5	Albert Hirsch	Middletown	J. O. Helm	New Florence
Morgan	5	A. J. Gunn	Versailles	J. L. Washburn	Versailles
New Madrid	10	E. E. Jones	Lilbourn	B. J. Allenstein	New Madrid
Newton	8	H. C. Lentz	Neosho	J. A. Guthrie	Neosho
Nodaway-Atchison-Gentry-Worth	1	Emmett B. Settle	Rock Port	Charles D. Humbert	Barnard
North Central Counties Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam)	2	P. V. Hart	Coatesville	J. S. Gashwiler	Novinger
Ozarks Medical Society (Barry-Lawrence-Stone-Christian-Taney)	8	J. M. Threadgill	Forsyth	Kenneth Glover	Mt. Vernon
Pemiscot	10	C. C. Castles	Caruthersville	C. F. Cain	Caruthersville
Perry	10	J. J. Bredall	Perryville	L. W. Feltz	Perryville
Pettis	6	E. L. Rhodes	Sedalia	Carl D. Siegel	Sedalia
Phelps-Crawford-Dent-Pulaski	9			M. K. Underwood	Rolla
Pike	2	Eugene Barrymore	Bowling Green	Charles H. Lewellen	Louisiana
Platte	1	L. C. Calvert	Weston	E. K. Langford	Platte City
Ray	1	L. D. Greene	Richmond	T. F. Cook	Richmond
St. Charles	4	J. M. Jenkins	St. Charles	Calvin Clay	St. Charles
St. Francois-Iron-Madison-Washington-Reynolds	10	S. C. Slaughter	Fredericktown	F. R. Crouch	Farmington
Ste. Genevieve	10	A. E. Sexauer	Ste. Genevieve	R. W. Lanning	Ste. Genevieve
St. Louis City	3	Llewelyn Sale	St. Louis	F. G. Pernoud, Jr.	St. Louis
St. Louis	4	Martyn Schattyn	St. Louis	Robert C. Kingsland	St. Louis
Saline	6	James A. Reid	Marshall	Charles A. Veatch	Marshall
Scott	10	A. P. Sargent	Sikeston	E. D. Urban	Sikeston
Shelby	2	D. L. Harlan	Clarence		
South Central Counties Medical Societies (Howell-Oregon-Texas-Wright-Douglas)	9	Garrett S. Hogg, Jr.	Cabool	A. C. Ames	Mountain Grove
Stoddard	10	H. A. Harris	Bloomfield	W. C. Dieckman	Dexter
Vernon-Cedar	6	F. L. Martin	Nevada	Rolla B. Wray	Nevada
Webster	8	C. R. Macdonnell	Marshfield	E. G. Beers	Seymour



## Effective in combating simple depression

When the cause of the underlying emotional disturbance is apparent—and when it has been properly ventilated—'Benzedrine' Sulfate has proved its effectiveness in the treatment of mild but persistent psychogenic depressions, such as may be found:

Attending *old age*

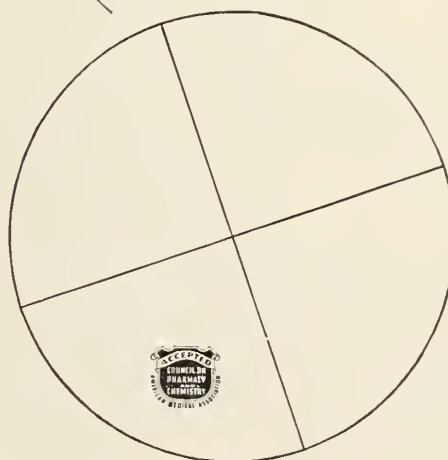
With prolonged *postoperative recovery*

Accompanying *prolonged pain*

When psychopathic problems develop *after childbirth*

Precipitated by *the menopause*

With debilitating or crippling *chronic organic disease*



# Benzedrine\* Sulfate

tablets • elixir

(racemic amphetamine sulfate, S.K.F.)

one of the fundamental drugs in medicine

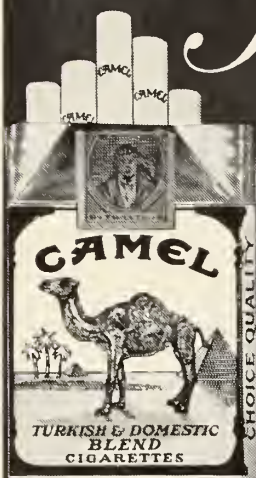


Smith, Kline & French Laboratories, Philadelphia



U. S. Pat. Off.

*Prove*  
**CAMEL MILDNESS**  
*for Yourself!*

The lower half of the advertisement features two women. The woman in the foreground is smiling broadly and holding a lit cigarette. The woman behind her is also smiling. A sign is placed in front of them, containing the following text:

*Money-Back Guarantee!*  
Test Camel Mildness for yourself in your own "T-Zone"—T for taste, T for throat. If, at any time, you are not convinced that Camels are the mildest cigarette you ever smoked, return the package with the unused Camels and we will refund its full purchase price, plus postage. (Signed) R. J. Reynolds Tobacco Company, Winston-Salem, North Carolina.



In a recent coast to coast test of hundreds of people who smoked only Camels for 30 days, throat specialists, after weekly examinations, reported:

*“Not one single case of throat irritation due to smoking CAMELS!”*



Hundreds of men and women were included in this coast to coast test. These men and women smoked Camels—and only Camels—for 30 consecutive days. They smoked on the average of one to two packages a day. Each week noted throat specialists examined the throats of these Camel smokers—a total of 2470 careful examinations. In every report, the findings of these throat specialists were the same—“not one single case of throat irritation due to smoking Camels.”



*According to a Nationwide survey:*  
**MORE DOCTORS  
 SMOKE CAMELS**  
*than any other cigarette*



Doctors smoke for pleasure, too! And when three leading independent research organizations asked 113,597 doctors what cigarette they smoked, the brand named most was Camel.

# Theocalcin

*Council Accepted*

## In Congestive Heart Failure

For the reduction of edema, to diminish dyspnoea and to strengthen heart action, prescribe Theocalcin, beginning with 2 or 3 tablets t.i.d., with meals. After relief is obtained, the comfort of the patient may be continued with smaller doses. Well tolerated.

Theocalcin, brand of theobromine-calcium salicylate,  
Trade Mark reg. U. S. Pat. Off.

Available in 7½ grain tablets and in powder form.

**Bilhuber-Knoll Corp. Orange, N. J.**

## The Norbury Sanatorium

Established 1901—Incorporated—  
Licensed—Jacksonville, Illinois

• ALBERT H. DOLLEAR, B.S., M.D., Superintendent. FRANK GARM NORBURY, A.M., M.D., Medical Director. SAMUEL N. CLARK, M.D., Physician. HENRY A. DOLLEAR, M.D., Physician.



### Maplecrest

- Pictured above — Restful, congenial home-like surroundings are combined with the most modern diagnostic and therapeutic equipment.



### Maplewood

- Pictured at left — Most comfortable homes for individuals requiring rest, scientific diagnosis and treatment. Fireproof construction.





## Old Age NEED NOT MEAN *Chronic Illness*

Clinical studies<sup>1,2,3</sup> demonstrate that the results of inadequate dietaries are insidiously cumulative and may not become evident for many years. Many of the afflictions of old age are now attributed to lifelong faulty dietaries and no longer need be the inevitable accompaniment of advanced years.

In advanced age the wisdom of dietaries high in vitamins, minerals, and protein, low in fat, and moderate in carbohydrate, is pointedly emphasized in reported clinical studies. Liberal amounts of vitamin B complex and of calcium, in particular, are important for increasing

the appetite and for supporting the calcium integrity of the skeletal structure.

Ovaltine in milk, a delicious *multiple* dietary supplement, is highly useful in the management of aged patients. Its multiple vitamins, its important minerals, and its biologically complete protein are the very nutrients required for effecting full adequacy of even seriously faulty diets. The refreshing tastefulness and easy digestibility are welcomed by the aged.

The rich dietary contribution made by three daily glassfuls of Ovaltine in milk, is outlined in detail in the table.

<sup>1</sup> Boss, E.P.: The Physiologic and Clinical Phenomena of Aging, New Orleans M. & S. J. 97:64 (Aug.) 1944.

<sup>2</sup> Spies, T.D., and Collins, H.S.: Observation on Aging in Nutritionally Deficient Persons, J. Gerontol. 1:33 (Jan.) 1946.

<sup>3</sup> Stieglitz, E.J.: Therapy of the Aged, M. Ann. District of Columbia 17:197 (Apr.) 1948.

**THE WANDER COMPANY, 360 N. MICHIGAN AVE., CHICAGO 1, ILL.**



# Ovaltine

Three servings daily of Ovaltine, each made of  
1/2 oz. of Ovaltine and 8 oz. of whole milk,\* provide:

CALORIES . . . . .	676	VITAMIN A . . . . .	3000 I.U.
PROTEIN . . . . .	32 Gm.	VITAMIN B <sub>1</sub> . . . . .	1.16 mg.
FAT . . . . .	32 Gm.	RIBOFLAVIN . . . . .	2.0 mg.
CARBOHYDRATE . . . . .	65 Gm.	NIACIN . . . . .	6.8 mg.
CALCIUM . . . . .	1.12 Gm.	VITAMIN C . . . . .	30.0 mg.
PHOSPHORUS . . . . .	0.94 Gm.	VITAMIN D . . . . .	417 I.U.
IRON . . . . .	12 mg.	COPPER . . . . .	0.5 mg.

\*Based on average reported values for milk.



**FREE FORMULARY**

DR. \_\_\_\_\_  
 ADDRESS \_\_\_\_\_  
 CITY \_\_\_\_\_  
 STATE \_\_\_\_\_

**ROUGH HANDS****FROM TOO MUCH SCRUBBING?**

Soften dry skin with AR-EX CHAP CREAM!  
 Contains carbonyl diomide, shown in hos-  
 pital test to make skin softer, smoother,  
 and even whiter! Archives of Derm. and  
 S., July, 1943 FREE SAMPLE.

**AR-EX COSMETICS, INC.,****1036 W. VAN BUREN ST., CHICAGO 7, ILL.****RADIUM** (including Radium Applicators) **FOR ALL MEDICAL PURPOSES**  
Est. 1919**QUINCY X-RAY & RADIUM LABORATORIES**

(owned and directed by a Physician-Radiologist)

W. C. U. Bldg.

**HAROLD SWANBERG, B.S., M.D., DIRECTOR**

Quincy, Illinois

**HAMILTON-SCHMIDT SURGICAL CO.***St. Louis, Missouri*

[[ Surgical Instruments, Invalid and Sick Room Supplies ]]  
 [[ Post-Operative Belts, Elastic Hosiery and Trusses Fitted ]]

**REGISTERED NURSE IN ATTENDANCE**

Central 1680

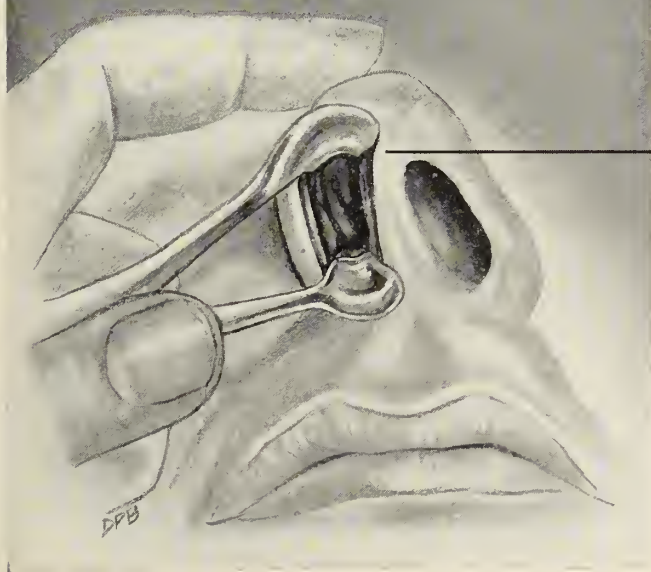
215 N. Tenth St.

*for Fifty Years***PROFESSIONAL PROTECTION****EXCLUSIVELY**

**THE**  
**MEDICAL PROTECTIVE COMPANY**  
**FORT WAYNE, INDIANA**

ST. LOUIS Office: A. W. Breckenkamp, Representative, 623 Missouri Theatre Building, Telephone Newstead 0404

promotes  
aeration . . . free drainage  
in colds  
. . . sinusitis



Nasal engorgement and hypersecretion accompanying the common cold and sinusitis are quickly relieved by the vasoconstrictive action of

## NEO-SYNEPHRINE®

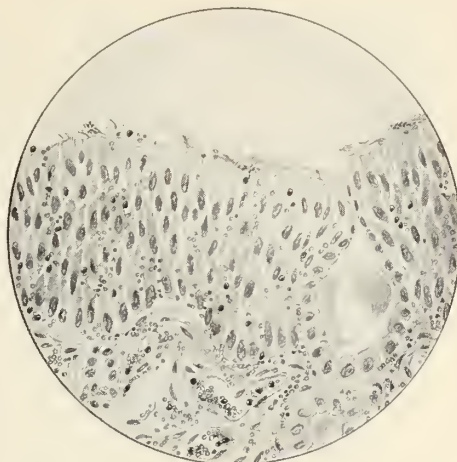
HYDROCHLORIDE

Brand of Phenylephrine Hydrochloride

The decongestive action of several drops in each nostril usually extends over two to four hours. The effect is undiminished after repeated use.

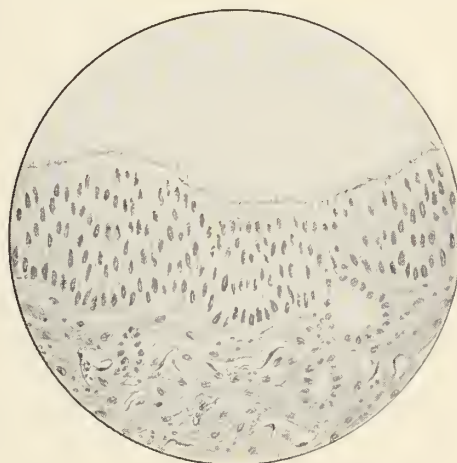
Relatively nonirritating . . . Virtually no central stimulation.

Supplied in ¼% solution (plain and aromatic), 1 oz. bottles. Also 1% solution (when greater concentration is required), 1 oz. bottles, and ½% water soluble jelly, ⅝ oz. tubes.



Nasal membrane showing increased leukocytes with denudation of cilia.

Normal appearing nasal epithelium.



*Winthrop-Stearns* INC.  
NEW YORK 13, N. Y. WINDSOR, ONT.



Neo-Synephrine, trademark reg. U. S. & Canada



# 50 and 1

## Years Treating Alcohol And Drug Addiction

In 1897 Doctor B. B. Ralph developed methods of treating alcohol and narcotic addiction that, by the standards of the time, were conspicuous for success.

Twenty-five years ago experience had bettered the methods. Today with the advantages of collateral medicine, treatment is markedly further improved.

The Ralph Sanitarium provides personalized care in a quiet, homelike atmosphere. Dietetics, hydrotherapy and massage speed physical and emotional re-education. Cooperation with referring physicians. Write or phone.

*The*  
**RALPH**  
**SANITARIUM**  
*Established 1897*

Ralph Emerson Duncan, M.D.  
DIRECTOR



529 HIGHLAND AVE. KANSAS CITY 6, MO.  
Telephone Victor 3624





# halt!

*bleeding even  
in brain surgery  
with Gelfoam\**

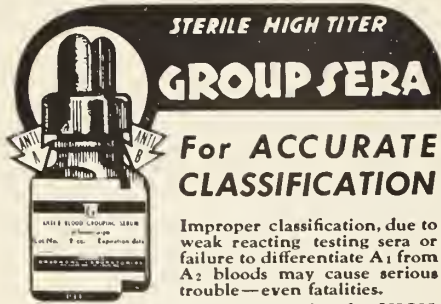
Not only in neurosurgery—where hemostatic *certainty* and minimal scarring are so critical—but in many other less dramatic but very common surgical applications, Gelfoam, an absorbable gelatin sponge, provides remarkable control of bleeding. Its prompt clotting action effectively arrests trickling from small veins, surface oozing, capillary bleeding and hemorrhage following resection. Cut or molded to the desired shape and applied with or without thrombin, Gelfoam is safely left *in situ* to be absorbed with little or no fear of tissue reaction.

\*Trademark, Reg. U.S. Pat. Off.

## gelfoam

*Fine pharmaceuticals since 1886*

**Upjohn**  
KALAMAZOO 99, MICHIGAN



Our Grouping Sera are certified for HIGH TITER. Exclusively prepared under the personal supervision of Dr. R. B. H. Gradwohl for safe, efficient, accurate laboratory technique. We invite your inquiries.

Our sera are manufactured under Government License No. 160, N.I.H. These sera are Anti-A, Anti-B, and Absorbed Anti-A. Absorbed Anti-A serum is to differentiate between A<sub>1</sub> and A<sub>2</sub> bloods. Anti-M and Anti-N sera are used for blood spots and paternity work. Our Anti-Rh serum is manufactured by the Blood Bank of Dade County and must be used with a viewing box.

Write for a sample copy of The Gradwohl Laboratory Digest full of helpful hints on improved laboratory technique.

**GRADWOHL**  
**LABORATORIES**

R. B. H. Gradwohl, M. D., Director

3514 Lucas Av.

St. Louis, Mo.



## A pilot for the past four years

Charles Myers, an above knee amputee, wore his first Hanger Limb over eight years ago. "During that time I was in Central America, Mexico, and Canada. In Central America I worked an air route surveys under jungle conditions. I found that my Hanger Limb stood up well." The sturdiness and dependability of the Hanger Limb allows wearers to return to normal life. Many, such as Mr. Myers, find they can continue their unusual occupations.

**HANGER** ARTIFICIAL LIMBS

1912-14 Olive Street  
St. Louis 3, Missouri



## THE WALLACE SANITARIUM

MEMPHIS, TENNESSEE

*For the Diagnosis and Treatment of Nervous and Mental Diseases, Drug Addiction and Alcoholism.*



# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies  
Issued Monthly under direction of the Publication Committee

COPYRIGHTED, 1949, BY MISSOURI STATE MEDICAL ASSOCIATION. ALL RIGHTS RESERVED.

VOLUME 46

FEBRUARY, 1949

NUMBER 2

G. V. STRYKER, M.D., Editor  
HELEN PENN, Assistant Editor  
623 Missouri Bldg., St. Louis, Mo. Telephone, Newstead 0404-05

PUBLICATION COMMITTEE { G. V. STRYKER, M.D., Chairman  
V. T. WILLIAMS, M.D.  
H. E. PETERSEN, M.D.  
FRED R. FARTHING, M.D.

### ALLERGY PROBLEMS

HERBERT J. RINKEL, M.D., *Kansas City, Missouri*

ALLERGY, like other fields of medicine, is beset with many problems. These are considered of such importance that a discussion of allergy problems has been requested specifically rather than the presentation of some new piece of work.

One might well divide allergy problems into two groups: those which are based upon a lack of fundamental knowledge and, second, those whose occurrence is dependent upon the failure or the inability, one or both, of the patient and the physician to carry out the necessary therapeutic program. It is the purpose of this paper to present a discussion of some of these factors which are of particular concern to the physician who is not specializing in the field of allergy.

#### I. THE PREVENTION OF ALLERGY

It has been established fairly well that sensitization is the direct result of specific contact in an individual who has inherited the ability to become sensitive. This relationship of specific contact to the development of a sensitization presents a workable plan for a prophylactic program. If, as is true today, wheat and corn allergies are about the same in incidence (being more than any other food) and this, in turn, is due to the frequency of their use, it should be apparent that prophylactic procedures in allergy, which are concerned with the avoidance of new sensitizations, are as important as the treatment of a specific sensitization after it has occurred. In carrying out prophylactic measures I have used a rotary diversified diet since October 1934. The object in using this is to prevent the development of new sensitizations, as well as to delay or possibly control some of those existing in a mild form. The principle of this diet is to rotate and diversify foods, thus getting away from the

habit of eating the same product every day of the week. This is particularly important with fruits and can be carried out easily with this group of foods. The function and use of this diet has been covered fully in a detailed article<sup>5</sup> recently published.

The principle of this diet is the use of a food, or any part of a food, at one meal only, rotating at a 24, 48 or 72 hour interval as indicated in each case. It should be apparent that the prophylaxis of allergy is most important in the young patient. Therefore, the infant who presents a feeding problem, or the baby with 6 months colic, or eczema and various skin rashes, should be, and is, a good candidate for employing this measure. The rotation and diversification of foods are not done because the person is allergic, but to prevent the possible development of a new allergy. It is done also when foods, to which the patient has been proven to be sensitive, have become compatible due to strict and continuous elimination. In this latter case, I have been able to feed foods for eleven years without recurrence of sensitization.

There is not much that can be done to avoid the development of sensitizations to pollen. The potential allergic individual, that is, the child born into an allergic family, should have some instructions at least concerning contact with ragweed. They should be taught to avoid deliberate, useless exposure in weed patches from August 15 until September 15. This is apt to occur when the individual goes fishing, or otherwise takes the day off to go along the brook or around lakes. These people also should be advised to stay out of timothy fields during the blooming period when the production of pollen is quite large compared to other grass exposures.

Since practically all allergic individuals show a definite sensitization to feathers, the use of covered

Presented at the 90th Annual Session of the Missouri State Medical Association, St. Louis, March 14-17, 1948.



feather pillows presents a real prophylactic measure in the allergic household. With the advent of the glass pillow, the potential allergic person now may obtain a feather substitute which is practically permanent and which will avoid, in light of present knowledge, the possibility of developing symptoms from the pillow. I specifically warn against the use of kapok as a substitute for feathers.

The next important item, in which something can be done for the relief or avoidance of developing a sensitization, is that of animal contact, particularly cat, dog and rabbit. The potential allergic should be instructed by his pediatrician, or family physician, in the matter of avoiding these contacts and he should then be checked repeatedly to see that this program actually is being carried out. Children, in an allergic family, should not be allowed to have cats on the place, nor dogs in the house or basement. This is particularly true when both parents are allergic. A dog may be permitted on the place (but not in the home or basement) after the child is old enough to follow instructions not to fondle the animal. Only recently, desensitizing patients to dog dander has been done successfully and, as yet, it is not felt that it is a measure to be used routinely. There are enough inhalants requiring desensitization that the added burden of animal dander treatment is not logical when animals can be eliminated. I have found that sensitization to cat or dog practically precludes relief if the individual insists on keeping the animal in the home. Potential allergic children should not come in repeated contact with live rabbits. There is yet one other animal dander sensitization which may be avoided, namely, goat hair. Many children become goat hair sensitive as a result of mohair finished dolls and teddy bears. In my experience, goat hair sensitization is clinically more important in ratio to the degree of skin sensitivity than is sheep wool.

Preventive steps to control development of house dust sensitizations are not nearly so feasible as the avoidance of animals but, nonetheless, it will be of value to reduce the concentration of house dust, particularly in the bedroom. The elimination of excessive dust catchers which may be bumped, releasing large quantities of dust, is universally stressed. Just why there has been so much emphasis upon elimination of drapes, pictures and other articles of furniture is difficult to understand. In this regard, I would recommend the use of a vacuum sweeper which actually collects dust and does not pick it up at one point, run it through a bag and out into the air where it again settles to be picked up on the following cleaning day. Specifically, it has been found that the Rexair vacuum sweeper will reduce the dust concentration in a room to one fifth the amount which exists when the ordinary bag type vacuum sweeper is used. In experimentation, a Rexair machine had an intake placed 6 feet off the floor, and 16,000 cubic feet of air was run through the machine on two occa-

sions. The first was when a bag vacuum sweeper had been used regularly until the time of the test. The second test was made a week later after the Rexair machine had been used daily for cleaning. The amount of dust collected was 45 grains with the first test, and 9 grains with the second test, one week after daily use of the Rexair machine. These machines are efficient reducers of dust concentration in the home. It must not be assumed that the use of this machine will automatically avoid the development of dust allergy for several reasons. First, it cannot remove all the dust and, second, the patient does not remain in his home all the time. It is only because from eight to ten hours of each day are spent in the potential patient's own home that dust precautions have any degree of efficacy.

Orris root is fast disappearing from the manufacture of cosmetics. Nonetheless, it is still true that patients give orris root skin test reactions and their asthma and hay fever improve with desensitization with orris extract. Therefore, it seems logical to assume that it is still a prevalent inhalant. The potential allergic person can aid himself greatly by the use of brands of cosmetics known to be free of orris root, not the ones claimed to be free of it but whose claim is not supported clinically.

## II. THE EFFICACY OF SKIN TESTING

Despite the many communications stressing the limitations of skin testing, it is still regarded as the criterion of diagnosis by many physicians. I have found that skin testing for foods,<sup>6</sup> irrespective of the type of material used (scratch or intracutaneous), or the experience of the tester, invariably yield results of an average value of 40 per cent accuracy and of 20 per cent diagnostic value. This means that if one has skin reactions to foods like wheat, eggs, milk or corn, in only approximately 40 out of 100 reactions can it be proven that there exists a concomitant clinical sensitization to the food giving the skin reactions. I recently have completed tests, using food extracts prepared according to refined technics, in which all irritating materials were supposed to have been removed. These tests were run on patients who had exhibited a clinical degree of sensitization as a result of a deliberate food test. It was found that such refined food extracts had no more value than the material prepared by the methods of the ordinary commercial firms, or my own practice of making glycerosaline extracts from the primary foods. Therefore, in evaluating findings, bear in mind that skin tests for foods will not average more than 40 per cent accurate and 20 per cent diagnostic in a series of patients. This means that if one tests all foods available to the patient, and tests several hundred patients who have been clinically controlled, i.e., they do not have symptoms except with a known error in the diet, and a comparison of the positive skin test findings and the known sensitizations will reveal 20 per cent of the etiologic foods, at one time or another, gave positive skin tests.

Now, in contradistinction to this degree of accuracy in tests for foods, there is a potentially high degree of accuracy when testing for inhalants. During the last seven years, since technic of testing for inhalants has been refined and improved, I have not seen a single patient sensitive to an inhalant who did not have a positive skin test to that inhalant at the time symptoms occurred. There are many occasions when the skin test is positive in the absence of symptoms. It can be stated safely that if inhalant testing is comprehensive and is carried out with extracts which are non-irritating, that one will, upon original skin testing, obtain positive reactions to a number of inhalants and that more than 98 per cent of the etiologic inhalant products will be included in this group of reactors. This does not mean that 98 per cent of the positive tests actually will be associated with the production of symptoms. It implies that among the reactors there will be 98 per cent of the causative factors. It requires experience, clinical judgment and history evaluations to select the ones necessary for therapy.

### III. CLIMATIC FACTORS

Every physician has been asked repeatedly concerning a climate where a patient's allergy would be permanently better. There is no such climate. The best climate, for a patient with asthma or hay fever, is the place where he wishes to live. In other words, the patient should select the place to live and stay in that community and work out his allergy in that locale. Experience has shown that not over 1 per cent of the patients who travel for the relief of asthma actually get permanent relief. Furthermore, relief cannot be promised to a patient until, and unless, the specific causes of the asthma and the hay fever are known. If a patient can go four miles from his home and remain free of symptoms, that patient need not leave the community to obtain relief. There are certain patients who can go to the mountains or the seashore and eat foods they cannot eat in Missouri. As soon as they return to this area, they again have trouble upon eating these foods. These patients have concomitant reactions to foods and inhalants and thus are able to eat the foods in geographic areas where the inhalants, to which they are sensitive, do not exist. They will, however, invariably become sensitive to the inhalants in the new geographic areas if they remain there a period of time.

There are some places where it is easier to be treated than others. For instance, it is easier to treat a hay fever patient in Jefferson City, Missouri, than in St. Joseph, Missouri. It is still easier to treat a patient in Topeka, Kansas, than in Kansas City. It is much more difficult to treat a patient in Omaha than any other place I know about.

### IV. THE PROBLEM OF HOUSE DUST ALLERGY.

House dust and ragweed pollen are the two most important inhalants. House dust is an important factor not alone because of its distribution but its

continuous occurrence. In fact, there is no time of the year when it may not be a cause of symptoms. Finally, it is important because therapeutic measures are subject to a wide variety of influences, probably more than any other allergen. The real understanding of the problem of house dust allergy depends upon a knowledge of its nature and the variations of sensitization in the different seasons. Randolph<sup>2</sup> has stated that the house dust season is the reciprocal of the baseball season. This is the time of year when it is of major importance, although it is an etiologic agent for many patients at any time. House dust and thermal food allergies are the two major causes of the increase of sinus disease and asthma in the winter months. It is also the most common cause, along with thermal allergies, in the causation of "acute colds" and, together, they constitute the most important probable cause of frequent colds in allergic individuals. The reference here is to colds of the type suffered by the allergic member of the family but is not transmitted to other members of the same household.

The first item of major importance in the handling of dust sensitization is the varying degree of sensitization in the same individual at different times of the year. This is of importance since therapy must be in terms of the patient's degree of sensitivity as of today, and not in terms of his sensitivity when originally tested. The dust sensitization curve is illustrated in figure 1.

Inspection of this curve indicates that the least degree of sensitization is during the late spring days and summer. It will be seen that with the advent of the various pollen seasons, there is an increase in the degree of sensitization for a small per cent of the patients. At times this is pronounced enough that therapy is not only ineffective but the patient is actually made worse with each injection. While some patients show an increase in the degree of sensitization with the advent of the pollen seasons, others may not do this but begin to have symptoms in the pollen season, although their pollen dose is adequate and correct in amount. This is a common experience in the late tree season and during the early grass pollinating period. These patients are relieved only when the dust dose is adjusted in terms

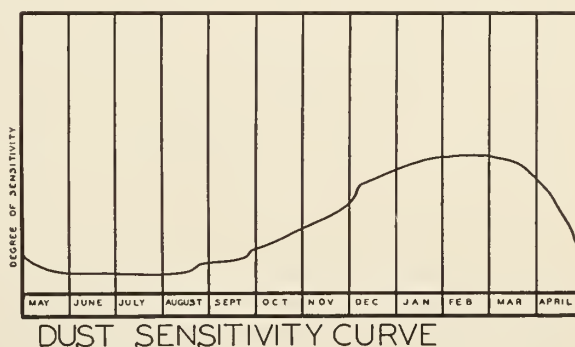


Fig. 1. Dust Sensitization Curve: Degree of sensitivity is indicated by the abscissa and the months by ordinates.



of the concomitant degree of dust allergy. Continuing through the fall months, another sizable group of dust sensitive patients will show an increase with the advent of the first cool days. It is surprising how quickly a dust allergy will be altered after a few days with the home closed and the furnace on. This is the result of an increased dose of inhaled dust. The increase is due to the lack of dilution of the room air by the outside air and, further, the decrease in humidity with the use of heat increases the dispersion of dust particles. The patient who has symptoms when the warm air comes up off the register or radiator has something wrong, as a rule, with the dust dose and should be investigated for this probability at once.

Continuing through the fall days, dust allergies tend to increase until the first week in December. It might be more correct to say they insidiously increase and the breakover occurs in early December. It is so characteristic that when one has a patient whose therapy is effective until December 10, and then without any apparent change in the etiologic status, symptoms recur, one checks for changes in dust sensitivity first and then investigates dietary factors. The most obvious change in the degree of sensitization occurs during December but there is often a slight constant increase until the third week in January when the peak of the dust season is reached. Then it seems to remain stationary until the homes are opened again during the early spring days, reducing in proportion to the number of warm days, which in turn makes a reduction in the concentration of dust in the home and an increase in the degree of humidity. As the degree of sensitization reduces, the dose may become inadequate. Then the patient will have symptoms at the start of some pollen season but not, necessarily, from the pollen itself.

The facts just stated make it imperative to determine changes in both pollen and dust allergies, not just in pollen alone, even during the spring and summer months. It is impossible to tell by the patient's story whether the recurrence of symptoms is due to too much or too little house dust dose. This has been, in my experience, evaluated quite satisfactorily by means discussed in the section of "Inhalant Dosage."

Thus, the problem of house dust allergy is not alone a problem of contact. It is a problem concerned with the interacting influence of pollen seasons, the thermal seasons and therapy. When all three of these factors are evaluated, the results with house dust therapy are satisfactory.

#### V. DETERMINATION OF THE CORRECT INHALANT DOSE

This is a problem which concerns the nonspecialist in allergy in every instance, when the patient is returned to him for the administration of doses. There is no way in which any allergist can compute, on original testing, the correct maximum dose for any patient or for all, or any, antigens with the

same patient. The computation of dosage on the basis of experience is of little value unless that experience is based upon a recognition of the original degree of sensitization and a knowledge of the changes that occur in patients with treatment, and in the different pollen seasons. First, most patients have a reduction in their degree of sensitization with treatment but this is only true for approximately 43 per cent of the total group. Second, about 36 per cent of the patients show no change in their degree of allergy. Third, approximately 21 per cent of the ragweed sensitive individuals and 22 per cent of the pigweed sensitive patients show an increase of sensitization in these respective pollen seasons even with treatment. Fourth, while these three changes cover all such factors, some of the changes are so dramatic and extensive as to require more explanation. Occasionally one will see patients whose treatment has been satisfactory until the advent of one of the minor pollen seasons. Then these patients will begin to have local or systemic reactions in spite of the dose being reduced by one third, or even one half, as directions usually advise. Reduction of the dose may be practiced repeatedly throughout the season with reactions, in spite of the lowered doses. In one such case it was found that when a ragweed sensitive patient entered the ragweed season, his degree of sensitivity to ragweed increased so much that the end point of reaction changed from the 1:2,500 dilution to that of the 1:1,000,000. When doses were adjusted on the basis of this change in sensitization, relief was afforded the patient. Cases with this marked degree of variance in sensitizations are not numerous but there is sufficient increase in 21 per cent of the ragweed and pigweed pollen cases to warrant an adjustment in the dose. From the foregoing it becomes apparent that if one wishes to give his patient the best of care, a coseasonal retesting is necessary and the dose should be adjusted to the coseasonal findings. It is also evident that since a good per cent of patients show an increase of their degree of allergy with treatment, it is well to recheck perennial types of sensitizations after six to ten doses have been given, and sooner if the history indicates probable changes are occurring as described. It is my practice to do this after the sixth dose. Some physicians reduce the dose of all inhalants when they enter the season. This is generally done by one third or one fourth. This change is not scientific medicine for it is only necessary to reduce the dosage for from 21 per cent to 22 per cent of the patients. Furthermore, the blanket reduction of all doses does not take into consideration the fact that other inhalants need not be reduced when the ragweed must be. In other words, it has been established beyond a reasonable doubt that there is a minimal dose required for each specific antigen capable of causing symptoms and treatment based upon the idea of using a small amount of each antigen, to which the patient has reacted, is not of any value unless it so happens that this



amount is proportional to the existing degree of sensitization.

It has been my finding that only 7.7 per cent of the patients show no appreciable change in sensitization to any antigen. This corresponds to the percentage of patients whose results were entirely satisfactory by the older methods of treatment. There can be no satisfactory substitute for a re-evaluation of sensitization, particularly after the patient has reached the arbitrarily selected maximum dose and, again, as they enter the pollen season, or the dust season, as the case may be. Knowing the dust sensitization curve for the year, one now is on the alert for such changes and anticipates them by rechecks even when the patient is getting along satisfactorily. These changing factors of sensitization, which affect dosage, will indicate to the family physician what investigation is necessary to make possible the best results. Best results with inhalant therapy are obtained when the local reaction is not over 1½ inches in diameter and is gone in from eight to eighteen hours, varying with the adiposity of the tissues at the site of the injection. It has been my experience that when doses are administered on the basis of local reaction alone, the error in adjusting dose is three times greater than when titration methods are used. It has also been found that when patients obtain a local reaction of from 3 to 4 inches in diameter, which persists for two days or longer, a reduction of a dose to 1/75 the amount which produced this is an effective dose. It may even be lowered to 1/100. The usual set of instructions advise one to reduce the dose to the second smaller dose, which is usually a 10 per cent reduction.

Estimation of the dose of inhalants is subject to a known fixed pattern of influences which must be evaluated. There is no method of testing, on one occasion, which will give this information.

#### VI. DRUGS AS AN ETIOLOGIC FACTOR

One of the problems in the therapeutics of allergy, which has received little consideration, is the frequency with which drugs are, of themselves, of etiologic importance. In the treatment of eczema, which was formerly carried out, it was the steadfast rule to evaluate first the drugs previously used as possible causes of the continuing skin eruption. Excipients used in the making of pills and capsules are a common cause of allergic reactions. A number of years ago when vitamin C came on the market, the enclosed literature stated it was a cure or, rather, that it would improve allergy. Yet in a series of twenty-five patients to whom I gave vitamin C, it caused symptoms in over 60 per cent of the patients. A careful study of the vitamin B preparations has shown that many of them precipitate symptoms. In fact, the ratio of patients who are made worse by giving them vitamin B complex, as compared with those who state they feel improved is better than fifty to one. That is, fifty patients will have their symptoms increased, to one patient who

states that the B complex has improved his general condition. Several years ago a patient developed asthma following the eating of beans. He was given medication for the relief of his symptoms, which continued for two months. Eventually it was discovered that the tablets he used contained corn starch and when the patient took medication free of corn starch, he cleared up in five days. More recently Randolph<sup>3</sup> has followed up my work on the frequency of corn as an allergen and has reported other instances of sensitization from capsules and tablets. Specifically, there have been reactions from corn starch in tablets, from corn glucose in cough preparations and expectorants. During the last two months I have had repeated occurrences in which corn starch was contained as an excipient in antihistaminic drugs which produced reactions, even though the drug would partially control symptoms in the warm weather when the reactions to corn were not as great as they were during the cold weather (for the particular patient being reported). It is a sad commentary on the therapeutic efficiency of the antihistaminic drugs that their good effects can be neutralized by the corn starch contained as an excipient.

#### VII. THE PROBLEM OF DRUG THERAPY

During the last few years there has been an increasing number of antihistaminic drugs used to treat allergic diseases. It has not yet been proven that histamine is solely responsible for the allergic reaction. Nonetheless, there are a number of drugs available and they have a place and are worthy to be used—but should not be abused. I have not been able to obtain relief of asthma with most of the antihistaminic drugs. This is not true of Hydryllin, which is a combination of the base benadryl with aminophyllin. Hydryllin has been dramatic in its relief of 10 per cent of the asthmatics and has been of some value in another 58 per cent. All users of these various drugs should be aware of the problems they precipitate. When they are effective, they tend to delay the willingness of the patient to have a specific diagnosis made. They invariably are better for nasal and urticarial eruptions than they are for asthma. It is not uncommon for patients to treat their nasal symptoms with one of the antihistaminic drugs and allow themselves to become asthmatics because no attention has been paid to the establishment of an etiologic diagnosis.

The next problem precipitated by the constant use of these drugs is that of blood dyscrasias and cerebral reactions, which as yet are not fully understood. One should not allow patients to continue the indiscriminate use of any of these preparations until more is known concerning their constitutional effect. During the current period of interest in antihistaminic drugs, the value of older ones may easily be overlooked. One of these combinations which has proven to be of great value, is that of ephedrine, atropine, tartar emetic and a theophyllin salt. The prescription I have used is:

Ephedrine	Gr. X
Sodii Phenobarbitalis	Gr. XX
Atropina Sulphatis	Gr. 1/10
Tartar Emetic	Gr. 1/3
Phyllicin	Gr. LXXII
Fac Capsulas	XXIV
Sig: 1 q 4 hours p.r.n. for symptoms.	

This prescription was made up in ordinary uncolored capsules and was dispensed to the patient with three other capsules, these being designated by letters—A, B, C, D. The patient was instructed to first try A, then B, C and D, and report which capsule gave the most relief. It was found that among hay fever and asthma patients, 75 per cent preferred the prescription given. It also was found that in the 25 per cent who did not feel it gave the most relief, it had produced adverse reactions such as stomach distress. Since there was nothing in the packaging or order of use that would give preference to the ephedrine-phyllisin (theophylline-calcium salicylate) combination, it would appear to have definite value over the other combinations. These were: (1) a capsule containing ephedrine, aspirin and phenobarbital, (2) ephedrine and phenobarbital, and (3) ephedrine and aminophyllin.

Another word concerning the problem of drugs. During the last few years there has been an increasing number of patients who have had a classical pattern of perennial nasal allergy due to the use of inhalers of one type or another. These must be discontinued for at least a week to establish the fact that they are, or are not, the cause of symptoms.

#### VIII. THE PROBLEM OF THE PATIENT WITH CHRONIC FATIGUE

As long ago as 1933 I included fatigue<sup>1</sup> as one of the eight most prevalent symptoms of food allergy. However, little has been written concerning the subject other than that by Rowe,<sup>8</sup> until recently when Randolph<sup>4</sup> stressed fatigue and gave particular reference to personality changes in children in the presence of the fatigue syndrome. Several years ago I proved that fatigue was a manifestation of a degree of sensitization, not capable of producing clinical respiratory symptoms. This means that the family physician will see a great number of patients complaining of chronic fatigue for which he can find no cause, and these patients may not exhibit hay fever, perennial nasal allergy, chronic sinus disease, gastrointestinal allergy or asthma. Fatigue is also a precursor of migraine headaches<sup>7</sup> and is almost always a symptom component in these patients. Allergy should be considered in the differential diagnosis when a patient is subject to chronic fatigue. When fatigue is due to allergy it may be intermittent or constant. When constant, it is produced by contacts made at intervals of seventy-two hours or less. When intermittent, the contacts are made just preceding the onset of symptoms and will continue for two to three days as a rule.

The clinical pattern of fatigue may exist primarily or in conjunction with established allergic syndromes. Thus, some patients with asthma and hay fever will be chronically fatigued, and others will have intermittent episodes of tiredness. In the patients with respiratory allergy and tiredness or fatigue, it has been found that fatigue could be produced by feeding a food once in three days, but the patient would not have nasal reactions unless the food was eaten twice in the same day, or two days in succession. Tiredness must be looked upon as a manifestation that heralds the approach of an allergic storm. When due to foods, tiredness usually develops between ten minutes to an hour after eating and persists for two to three days after a single ingestion of the specific food. This type of fatigue has resulted in a folk lore, namely: "I've eaten so much for dinner I am sleepy." The fact is that patients may eat food until they have abdominal pains but they do not get sleepy unless they have ingested a food to which they have an allergic toxemia.

I should like to stress one point—an understanding of the incidence and the etiologic factors of fatigue are not known until one checks foods deliberately. Thus, the physician who has not done this will not appreciate its importance and may even disregard it as an important clinical entity.

#### IX. THE PROBLEM OF ACUTE AND CHRONIC COLDS

At present there is little understanding of the mechanism of production of acute or chronic colds, and there is far less knowledge concerning the fact that allergy may act as a specific precipitating factor in the production of what appears to be an infection. This statement is based upon examinations made by a competent otolaryngologist of patients studied during seven years of experimentation. In these patients it was possible to deliberately provoke an acute ethmoid or maxillary sinus infections. The "sinus infections" were precipitated at will and were always produced when the conditions were correct for their occurrence: namely, first, the eating of a food to which the patient had a thermal type of sensitivity; second, exposure to cool air or chilling below the critical temperature for that patient (usually 45 F. or less). In the case of "maxillary sinus" it was necessary to produce a congestion of the nose with nasal obstruction on the side affected, plus exposure to cold air, to produce the so-called infection. In the "ethmoid infection," reactions would occur with the use of the food and exposure to air below the critical temperature but without an associated excessive amount of post-nasal secretions.

The foods which I have found to be of clinical importance in the causation of so-called colds are: corn, coffee, eggs, wheat, rice, lettuce, but seldom fruits, although these have been observed. Specifically, in the corn sensitive patient reactions have been produced from foods or drugs containing corn starch, corn syrup or corn sugars. Reactions were



produced by the use of Karo white corn syrup in a candy mix and, a few days later, the same patient developed a reaction as a result of using the same jigger to pour brandy which had been used to pour bourbon.

In Doctor Hansel's office I have seen a patient whose history, physical findings and the gross characteristics of nasal secretions, blown for examination, all indicated the patient was suffering from true infection and not allergy. However, when this purulent material was stained, it had more than 95 per cent eosinophils in it. The patient was an allergic individual and treatment directed along these lines resulted in effective relief of the patient's symptoms. If one translates this experimental work into clinical usage for the general practitioner, it is to be seen that the patient with constantly recurring colds should have the probability of allergy evaluated, as well as being treated because of lowered resistance and given vitamin or liver extract to improve the health.

Clinical experience indicates that patients subject to frequent colds, which are experienced by the patient only but not by other members of the family, should be investigated carefully from the standpoint of an allergic factor. In other words, the presence of an allergic etiologic background should be ruled out, or established. Repeated nasal smears, according to the technic advocated by Hansel,<sup>1</sup> will help the physician to establish the borderline diagnosis. These colds differ in that they are preceded, as a rule, by two days of clear nasal secretions, then purulent secretion and temperature develop in unison. The temperature continues for a day, the expectoration usually lasts three days. The characteristic duration of these reactions, simulating a sinus infection or an "acute cold," is a five day period following the ingestion of a food on one occasion. If a patient has continuous symptoms, it also means the cause is more or less constant. When the purulent secretions are once established and the patient again breaks the diet, there will be an increase of purulent secretions in a matter of from eight to ten hours. If the attacks develop on a previously clear background, the purulent secretions do not develop until approximately thirty-six to forty-eight hours after the onset of symptoms. In patients subject to recurrent colds, I have observed them to become bedridden as a result of the use of cod liver oil. I have seen the same thing occur from vitamin C, from vitamin B complex and from other medication designed "to build up" the patient. There should be a more clearly defined differentiation between building up a patient and a specific diagnosis. The increase of the good health of the patient can be arrived at much easier in the presence of a specific diagnosis and its complete and correct following out than by any vitamins, tonic, or the use of a food to which the patient is allergenic.

#### X. THE PROBLEM OF COOPERATION AND ADHERENCE TO THE THERAPEUTIC PROCEDURES

In my experience, one of the most important problems in allergy is not lack of knowledge, or a paucity of good drugs, or the need of more accurate diagnostic measures. It is the fact that all too many patients either will not, or cannot, cooperate. Usually cooperation is in inverse ratio to the profuseness of the patient's promise, that "I'll do everything you say, Doctor." A number of years ago, when some of the diagnostic methods were less perfectly understood than at present, a series of eight patients reported within a short period of time, that they had done everything they had been asked to do and yet they had obtained no relief. Since the efficacy of the methods needed to be established or else discarded, I placed those eight patients under twenty-four hour control. This is a system of observation and feeding in which no symptoms occur without being registered by someone other than the patient. Furthermore, every contact is known. These controlled studies with the eight patients revealed that in five days seven of them had become symptom free. The eighth did not clear nor, in my opinion, could ever be cleared of symptoms. In checking the new findings with the old ones, it was discovered that the seven patients who had cleared of symptoms had, in every instance, been supplied with correct typewritten instructions which had covered all their necessary omissions and therapeutic procedures. In other words, they did remain free of symptoms when they followed instructions. It was obvious that they either had not read the instructions or, if they had, they did not follow them.

One cannot apply the results of these eight cases proportionally to all patients. Nonetheless, it has been my frequent observation that for some reason patients do not study their outlines or, if they do, they consider them irrelevant. It is actually true that the most likely cause for the average patient to get poor results is due to the fact they do not apply themselves to a study of the problems concerned in the management of their disease.

The treatment of allergy is like that of diabetes in that the more the patient has learned about the details of his etiologic factors and specific contacts with foods and inhalants, the better he will get along under treatment.

Sometime ago, I was intrigued as to why the sickest patient I had ever treated had been free of symptoms for thirteen years. In conversation with this patient one day, I mentioned my interest. I stated that while she was the most severe asthmatic I had ever seen, she had gotten the most complete and the most consistent relief. I asked her if she had any explanation for this fact. Her reply was unique and instructive: "I do what you tell me."

It should not be assumed that if every patient followed instructions to the letter, that there would be no failures; but there can be no denial of the fact that there would be far fewer failures in therapy.



It is not an uncommon experience to see an allergic individual who has been skin tested and found sensitive to wheat, who reports that his physician had taken him off of white bread and placed him on whole wheat bread. Another patient, whose diet required the elimination of milk, stated to me, "To be sure I did not break my diet, I ate only cottage cheese salad for lunch and always have ice cream for dessert at dinner." Another patient was given a printed list of the foods containing wheat. She called the office ten days afterwards to ask concerning malt. She was advised that it was the first word in the fourth line of her printed instructions concerning wheat elimination.

The nature of some of these reports may border on the comic, but they should be labeled as tragedy-comedy because, in many instances, such episodes have been the cause of long continued symptoms, inflicting upon the patient needless examinations and study in various clinics.

#### SUMMARY AND CONCLUSIONS

Ten pertinent problems in the clinical practice of allergy have been detailed.

Of particular importance is the knowledge of the dust sensitization curve. Next in import is the problem of establishing the correct maximum inhalant dose.

Fatigue, as a problem in clinical medicine, has not been evaluated carefully in terms of allergy. It is suggested that allergy be considered in the differential diagnosis of the etiologic possibilities for chronic fatigue. Drugs used in the treatment of allergic syndromes may contain excipients or be specific allergens of themselves. These, too, should be evaluated in the patient whose results are not satisfactory.

Finally, one of the most important and difficult problems is to obtain careful and exact cooperation of the patient and the study, in particular, of the instructions given to the patient. It is seldom true that the patient is not given carefully detailed and exact instructions. It is often the case he fails to read them or, if he reads them, he fails to follow them.

2005 Bryant Bldg.

#### BIBLIOGRAPHY

1. Hansel, French K.: Allergy of the Nose and Paranasal Sinuses, St. Louis, C. V. Mosby Co., 1936, p. 628.
2. Randolph, T. G.: personal communication.
3. Randolph T. G.: Corn Starch and Corn Sugar as an Allergen, read before the American Academy Allergy Meeting, St. Louis, December 18, 1947, unpublished.
4. Randolph, T. G.: Fatigue and Weakness of Allergic Origin: to Be Differentiated from "Nervous Fatigue" or Neurasthenia, *Ann. Allergy* 3:418-430, 1946; Allergy As a Causative Factor of Fatigue, Irritability and Behavior Problems of Children, *J. Pediat.* 31:560-572, 1947.
5. Rinkel, Herbert J.: Food Allergy. IV. The Function and Clinical Application of the Rotary Diversified Diet, *J. Pediat.* 32:3 (March) 1948.
6. Rinkel, Herbert J.: Food Allergy. *J. Missouri M.A.* 37: 428-431 (October) 1940.
7. Rinkel, Herbert J.: Migraine, read before Southwest Allergy Forum, New Orleans, 1945, unpublished.
8. Rowe, Albert H.: *Clinical Allergy*. Philadelphia, Lea & Febiger, 1937.

#### DISCUSSION

LEE PETTIT GAY, M.D., St. Louis: It is a pleasure for

me to discuss the excellent presentation by Dr. Rinkel on some of the problems in the practice of allergy. Although he did not say so, in so many words, he implied that allergy is merely a part of internal medicine. This is the proper attitude to take for allergy should be used as an important part of internal medicine because so many allergic diseases constitute problems which are systemic in nature. Allergic fatigue and allergic toxemia are familiar examples. To this I would add long continued fever, essential hypertension, paroxysmal tachycardia, eczema and acne. All of these conditions can be relieved easily by proper allergic management. The manner of discovering the individual sensitizations is largely a matter of personal choice.

Dr. Rinkel mentioned that skin tests with food extracts are positive in approximately 35 per cent of all cases tested. Skin tests for inhalant allergy, such as sensitizations caused by pollens, feather dusts, orris root and the various spores of fungi, which occur in the air, are highly accurate, and highly significant. Patients suffering from asthma, or perennial vasomotor rhinitis, should be treated with the specific allergens to which they give positive skin tests.

Treatment in this fashion I have found to be satisfactory, but I would like to add that those individuals are also food sensitive, and foods to which they are highly sensitive must be eliminated from their diets. I, myself, do not care for skin tests for foods. Personally, I think they are futile and confusing.

I have stated previously many times that I would much prefer to discover what a single individual food will do to the individual patient, rather than to discover what an extract of a food will do to an isolated portion of the skin. For that reason, I do clinical food testing. In other words, have the patient present himself fasting. Let him drink milk, eat an egg, drink tomato juice, or orange juice, or whatever it is to be tested. If there is an immediate occurrence of sneezing, or of a nasal discharge, or if that food precipitates an asthmatic attack, abdominal pain, headache or an increase in eczema, one knows perfectly well that that food is a potent allergen and should be eliminated from the diet.

Anyone can do such a test. It is not complicated. Simply have the patient come to the office without breakfast. Instruct him to bring a bottle of milk and drink the bottle of milk. If that individual has symptoms—and many allergies will in a high percentage of cases—one knows perfectly well that the test food should be eliminated. It is such a simple thing to do, and it is so positive and so accurate, that any one can do it, and one gets much valuable information.

In the treatment of food allergy of any kind, it is important to keep that individual from sensitizing himself to additional foods. This is a common occurrence if any food is allowed to appear in the diet with too much frequency, and I have seen this type of sensitization occur many times. The way to prevent this type of sensitization is to employ a regular alternation of diet. This might be called a prophylaxis of allergic diseases, and alternation of diet is one of the most important and frequently overlooked features in the treatment of any allergic manifestation.

This I have recognized for many years, and long ago I devised a menu for the treatment of allergic diseases. This menu was published in *THE JOURNAL of the MISSOURI STATE MEDICAL ASSOCIATION* in July of 1941. I have found it to be the most valuable instrument I have been able to use in relief of allergic disease. One would be amazed to know how many diseases really

are of allergic origin. The obvious conditions are self evident and, of course, everybody recognizes hay fever, hives and asthma, but there are other things, too, which one must consider. I think it is a mistake to feel that allergy in itself is a specialty. Allergy is nothing in the world but an instrument which every practitioner of medicine or internal medicine should use to the best of his ability, because it is extremely advantageous. It is nothing but medicine.

I reported a series of interesting cases of long continued fever associated with allergic toxemia in 1936. I was able not only to relieve these patients of their temperature elevations, but I could reproduce their symptoms any time by the reintroduction of certain allergens into their diets. However, the journal to which I submitted this paper refused it on the ground that it could not possibly be an allergic condition, and that allergic management could not relieve such a condition.

Allergic toxemia is also associated with frequent extrasystoles, with attacks of paroxysmal tachycardia, and many times with essential hypertension. Again, this is something one may not believe, but by allergic management, 95 per cent of them can be relieved without any

difficulty whatsoever and, if there is a simple method by which any condition of the heart or of the vascular system can be controlled, that method should be welcomed by all the practitioners of medicine.

Perennial vasomotor rhinitis is a common thing. So is leukorrhea; but the tissues of the nasal mucosa and of the mucosa of the female genital tract are similar, and many times I have seen patients with a marked nasal discharge as well as leukorrhea. Relieving the one by dietary management relieves the other absolutely.

I have found that the most common causes of allergic symptoms are the basic foods—the foods which everyone has eaten all of his life. They are wheat, milk, egg, potato, pork, tomato, citrus fruits, pineapple and chocolate. I have eliminated these foods. If one tells the average patient to eliminate these foods, he does not know what to eat, but there are plenty of foods which do not happen to be the ordinary everyday conventional foods.

My published menu emphasizes how an interesting and balanced diet can be arranged for the management of allergic diseases even with the omission of the conventional basic foods.

## CORONARY HEART DISEASE

A. M. ESTES, M.D., *Jackson, Missouri*

CORONARY HEART disease has been brought to attention, especially during recent years, because research in this field has become more extensive and better means of establishing its existence have been brought about.

In coronary heart disease the electrocardiograph serves its greatest usefulness. This disease is the leading cause of death in individuals past 50. The greatest incidence is in physicians. In the words of Stroud,<sup>1</sup> the doctor should be interested and gain as much knowledge as possible of this disease because he will probably die from it.

About 400 years ago the average span of life was approximately 8 years. Up to the period of the American Revolution, it increased to 35.5 years. At the turn of the century, the increase was to 50 years and now it is about 64 years for men and 67 years for women. There are now approximately 6,000,000 people in the United States more than 65 years of age and, at the present rate of increase through better methods of management, it is estimated that by 1980 there will be approximately 20,000,000 at or above that age. Since cardiovascular disease leads in cause of death in the older age group, it is not hard to realize the importance of this subject. One can see, too, that greater knowledge of its etiology, pathology and recognition and methods of management are all important factors in extending the length of life, especially in older people.

### DEFINITION

Coronary heart disease means disease of the coronary arteries, plus any change that, as a re-

sult, might take place in the heart proper. Such changes may be temporary and due to anoxia. There may be occlusion with permanent injury to a small area of cardiac muscle but if the collateral circulation is sufficient that function is not clinically impaired. Finally, there may be occlusion of a large artery resulting in extensive infarction of muscle with serious impairment of heart function. Such changes may result in enlargement with sacular dilation as a result of localized degenerative areas. Conduction also may be altered due to involvement of the bundle of His or the septae. When the endocardium is disturbed, mural thrombi may be formed and, when the pericardium is involved, pericarditis results with its attached signs and symptoms.<sup>2</sup>

### ANATOMY AND PHYSIOLOGY

The heart is supplied mainly by two arteries, the right and left coronary.<sup>4</sup> The left coronary artery arises from the aorta at the left sinus of Valsalva. The main trunk courses posterior to the pulmonary trunk and ascends to the left interventricular septum where it divides. The anterior descending branch follows the septum to the cardiac apex, giving branches mainly to the anterior surface of the left ventricle and distal portion of the septum and a few branches to the apex of the right ventricle. The circumflex division skirts the heart to the posterior upper division of the septum and also the base of the right ventricle. The right coronary originates at the right sinus of Valsalva, travels in the groove between the right auricle



and ventricle to the posterior surfaces of the heart, giving off numerous branches to the right ventricle, auricle, the upper septum and also to the sinoauricular and auriculoventricular nodes.<sup>5</sup> Interference with circulation in this portion is more apt to result in conduction defects.

Coronary flow is maintained largely through the integrity of these vessels. Intercommunicating branches with the left coronary and the adventitial vessel of the aorta causes more abundant supply to the right heart. This might account for the less frequent infarction of the right ventricle. Along with this there is usually less strain on the right ventricle.<sup>2</sup> It is thought that this factor is important in the more frequent occlusion of the left descending branch. Whatever the cause, occlusion is most common in the left coronary.

Circulation to the heart is influenced by many factors. It is thought to be maintained by a proper balance. Luten<sup>5</sup> has stated that it is due to a balance between the inhibitory nerves, vasoconstrictors and sympathetic or accelerators, causing vasotonic dilation. These factors are influenced by blood volume, degree of anemia, oxygen content and various other extracardiac conditions. Elman<sup>6</sup> has shown that intravenous injection of fluids affects coronary flow. In dehydration, fluids increase cardiac output and coronary flow, whereas, in overhydration, the reverse is true.

#### PATHOLOGY

Narrowing and occlusion or occlusion of the coronary arteries is caused mainly by arteriosclerosis. In atheroma<sup>7</sup> there is a subendothelial deposit of lipid and cholesterol. Such changes have been found in early life and in some instances with ultimate consequences. The endothelium gradually is pushed toward the lumen, resulting in narrowing and in occasional occlusion without erosion or thrombus formation. With progression, however, atheromatous cysts or abscesses rupture with thrombus formation at the site of rupture. The ultimate consequence will depend upon the location, the age of the patient and the degree of collateral blood supply. Syphilis *per se* does not cause occlusion of the coronary arteries proper; changes are due to subendothelial encroachment upon the ostia resulting in partial or complete block. Similar change may be seen in rheumatic aortic valvular disease in which vegetative lesions are noted at the valvular base to encroach upon the opening of the coronary artery. I have recently seen one such case in which occlusion resulted in myocardial failure and death. Characteristic symptoms of coronary occlusion with electrocardiographic changes were noted and postmortum examination showed only a vegetative lesion closing the mouth of the left coronary. Griffith<sup>8</sup> reported three of thirteen cardiac deaths in a total of 10,000 cases of rheumatic fever studies due to coronary occlusion and sudden death. Occlusion was due to collagenous degeneration in the coronary arteries, lo-

calized, and with signs of associated allergic phenomena. Tumors, mainly myxoma and emboli, are rarely encountered.

#### SYMPTOMS

Pain is the most prominent symptom of coronary disease. Its mechanism is not fully understood. Is it due to distention of the blood vessel proximal to the point of occlusion, or is it due to ischemia of the cardiac muscle itself with resulting anoxia? Lewis showed that when circulation is impaired in the arm, pain rapidly develops upon motion. Pain was much delayed in its occurrence when the part remained at rest. This would suggest that activity in the presence of impaired circulation results in rapid accumulation of acid metabolites, whereas, in less activity, accumulation would be slower and pain less. Acid metabolites<sup>10</sup> accumulating in an overactive heart with deficient circulation is the most probable cause of pain.

In anginal syndrome, the pain is waxing and waning, increased with exertion and decreased or absent when at rest. It is substernal or radiating in various fashions but usually to the jaw, neck, left shoulder and ulnar aspect of the left arm. Anxiety or a heavy meal aggravates it. The pain always is relieved by nitroglycerin. The electrocardiogram is not significant. If changes are present, they are transient. In occlusion without infarction the pain is substernal, more constant and is not relieved by nitroglycerin. There is dyspnea, cough and sometimes temporary signs of heart failure. Here, as in the anginal syndrome, the electrocardiogram changes are not definitely significant.

Coronary thrombosis gives a picture of constant substernal pain, usually nonradiating and not relieved by nitroglycerin. It is difficult to relieve it by heavy doses of morphine. There is nausea and vomiting. The patient has a chill, fever, leukocytosis of from 10,000 to 20,000, with an increased sedimentation rate. Dyspnea is present with or without signs of shock. Oliguria is caused by the lowered blood pressure. The electrocardiogram changes are definitely significant (T 1, T 3 or mixed types). The precordial leads are important. Katz<sup>13</sup> has shown that precordial leads may show definite patterns of myocardial infarction when limb leads are normal or equivocal. This is particularly true in anterior wall infarction.

#### DIFFERENTIAL DIAGNOSIS

Pain of coronary thrombosis though characteristic, i. e., lower or middle substernal area, may be confused with other pathologic conditions. When upper abdominal pain is present, gallbladder disease, penetrating peptic ulcer, acute pancreatitis embolism, hiatus hernia and nerve root pain<sup>12</sup> and such, must be considered and ruled out. When pain is referred from the substernal area to the upper abdomen, in most instances it is due to pathologic condition in that area. This pain is independent or concurrent with reflex cardiac pain. Here, as



before mentioned, a careful physical examination is important. There is little need for confusion when one considers the history and clinical course leading to thrombosis and infarction. Anginal syndrome is present in a great majority of patients in which pain comes and goes with activity and rest. In thrombosis the pain is more constant, more sub-sternal and is less radiating. It is hard to relieve by any method. It is of longer duration, sometimes many hours. The electrocardiogram changes, leukocytosis, from 10,000 to 20,000, and increased sedimentation rate usually will clinch the diagnosis. In most instances serial electrocardiographic tracings are necessary for diagnosis and certainly so in following the clinical course of the disease.

#### TREATMENT

Therapy in any type of heart disease taxes the skill and ingenuity of the practicing physician. Unless he qualifies himself in proper management, the patient would have probably done better elsewhere. Psychologic care is important. Drugs are secondary and most important in pain and complications. In anginal syndrome, the pain is temporary; usually angina of effort ceases with rest or by use of nitrites. The patient should be taught to live with himself, to lessen activity and, possibly, change his occupation if that can be done without disruption. By simple means many patients live out the normal span of years to die of some other disease. Less fortunate individuals have progressive coronary disease leading to one or more thromboses with or without infarction. This treatment is entirely different from that for angina of effort. The patient is kept in bed about six weeks depending upon the rate of healing. Some patients may need to use a bedside commode.<sup>2</sup> Frequent change of position is important. Venous thrombosis usually can be prevented by free motion of the limbs and the use of anticoagulants. Coronary thrombosis requires emergency care. Morphine should be given early and in sufficient amounts to relieve pain and anxiety. The patient should then be hospitalized and oxygen therapy started as soon as possible. In my experience, the nasal catheter is superior to other methods. It is controlled easily and causes less strain on the patient. From three and a half to five liters per minute are enough to relieve cardiac anoxia. Plasma may be needed for severe shock. Gold<sup>13</sup> in his conferences on therapy in cardiac disease has discussed various drugs. Many of them are used but only few substantial ones are needed. Adrenalin and atropine dilate the coronary arteries but also increase the work of the heart to the extent that they are dangerous. Schemm<sup>14</sup> has reported the use of adrenalin in 200 cases of cardiac failure following thrombosis with success. Even though this report seems encouraging in heart failure, his work has not been accepted generally.

In the presence of heart failure, digitoxin should be used to full digitalization. Temporary early fail-

ure usually can be relieved by oxygen and sedatives alone. Not infrequently cardiac irregularities develop. These consist usually of frequent ventricular extrasystoles or paroxysmal ventricular tachycardia. Here quinidine sulfate is the drug of choice. The initial dose is 0.2 gm. (3 gr.) to test the sensitivity of the patient to the drug and, moreover, one dose may be sufficient. If not, one may give 0.2 gm. every 2 hours for four doses or 0.4 gm. every 2 hours for four doses until satisfactory therapeutic levels have been reached. Quinidine has been used prophylactically to prevent irregularity. Quinidine is used only when there are no signs of heart failure as evidenced by marked heart enlargement, passive congestion and the like. Quinidine and digitalis should not be used simultaneously. Anticoagulant drugs had best not be used unless facilities are such that they can be given without jeopardy. A universally accepted method of prothrombin determination would help to standardize therapy. The safety factor also would be broadened. Link<sup>16</sup> states that there should be no hazard with the least bit of precaution in the use of Dicoumerol.

The problem in rehabilitation is all important, but somewhat more difficult because the patient has by that time vanished from daily observation. His habits of eating, daily activity, smoking, drinking and the like, must be gone into in a constructive way for his benefit. Graduation back to a normal tolerance activity may require a much longer period. This will depend upon the extent of cardiac damage. Smoking should be advised against especially. Spirits in small amounts may be allowed before meals because they are vasodilators but, here again, one must guard against the hazard of overindulgence.

Surgery will not be discussed in this paper. It is restricted to those cases of intractable pain in which alcoholic injection and ramisectomy<sup>15</sup> in the lower cervical and upper thoracic regions have proven successful. Anastomoses and tissue reflexions have been tried but, up to now, benefits so derived are questionable.

#### SUMMARY

Coronary heart disease has been discussed from a standpoint of cause, recognition and general management of the anginal syndrome and coronary occlusion with and without infarction. No attempt was made to present research data but to give standard qualified methods which have been handed down by masters and have had an adequate trial period.

While this presentation is designed as a logical one for general men in medicine, it is hoped that others specializing in cardiovascular disease might gain some benefit.

225 West Main St.

#### BIBLIOGRAPHY

1. Stroud, C. Malone: Myocardial Infarction. Paper read before the Chicago Medical Society, Oct. 22, 1947.

2. White, Paul D.: Heart Disease, 3 ed. Macmillan, 1944.
3. Treiger, Irving J.: Atlas of Cardiovascular Disease, C. V. Mosby Co., 1947, p. 90.
4. Grant, J. C. Boileau: Atlas of Anatomy, Williams and Wilkins, 1947.
5. Luten, Drew W.: The Clinical Cause of Coronary Disease. Postgrad. Med. 1:345-351 (May) 1947.
6. Elman, R.: Parenteral Alimentation, 1947. p. 33.
7. Boyd: Pathology of Internal Diseases, Lea and Febiger, 4 ed. 1944.
8. Griffith, G. C.: The Rheumatic State, Paper read before the Chicago Medical Society, Oct. 22, 1947.
9. MacBryde, C. M.: Signs and Symptoms, J. B. Lippincott, 1947. p. 63.
10. Scherf, David, and Boyd, Linn: Cardiovascular Disease, J. B. Lippincott, 1947.
11. Katz, L. N.; Dolgin, M., and Langendorf, R.: Precordial Leads in Clinical Electrocardiography, Med. Clin. N. America 32:197-212 (January) 1948.
12. David, David: Spinal Nerve Root Pain (Radiculitis) Simulating Coronary Occlusion: A Common Syndrome, Am. Heart J. 35:70-80 (January) 1948.
13. Gold, H.: Cornell Conferences on Therapy, v. II, 1948.
14. Schemm, F. R.: Use of Adrenalin in Acute Myocardial Infarction, Paper read before the Chicago Medical Society, Oct. 22, 1947.
15. White, J. C.: Surgical Relief of Severe Angina Pectoris, Bull. New England M. Center 9:1-8 (February) 1947.
16. Link, K. P.: The Anticoagulant Di-coumerol, Paper read before the Chicago Medical Society, Oct. 21, 1947.

## PITRESSIN TEST

USEFULNESS IN THE DIFFERENTIAL DIAGNOSIS OF CHEST PAINS

MICHAEL BERNREITER, M.D., *Kansas City*

ANGINA PECTORIS is a distinct clinical entity. Patients suffering from this disease may die suddenly during an attack. Once the diagnosis is made a carefully controlled existence may add many useful years to the patient's life, while carelessness—in behavior or in diagnosis—may end life quickly. It therefore becomes imperative to isolate correctly from those patients who have chest pain the ones who have angina pectoris.

Nearly one fourth of all cases of angina show a normal heart by all methods of examination and the diagnosis depends entirely on the correct interpretation of the one and outstanding symptom—pain in the chest. But pain in the chest is a symptom of many conditions unrelated to angina. Herpes zoster, intercostal neuralgia, cervical rib, thoracic tumors or aneurysm, arthritis of the spine, subdeltoid bursitis, gallbladder disease and many more may all simulate angina.

Finally, coronary thrombosis and angina pectoris may occur in manifold relationship. Innumerable combinations of the symptom complexes of the two are conceivable, although they must be regarded as separate and distinct entities, the one purely a pathologic process, the other a physiologic state.

It is clear, then, that thoracic pain may be quite nonspecific; its appearance is not necessarily a sign of angina pectoris or coronary heart disease. It is a symptom that may originate in the heart, in other thoracic structures or in the abdomen. Nevertheless, it is of the utmost importance to have a clear conception of what angina pectoris is and to determine who has it and who does not have it. The gravity of such a diagnosis is known to most laymen and if it is made on inadequate grounds in a neurotic individual may cause unnecessary mental anguish and lead to invalidism.

Coronary insufficiency with or without the anginal syndrome is "that condition in which the coronary arteries deliver less blood than is required for the effective performance of the heart." In some

cases a constant relationship exists between the amount of pain and the degree of effort on the part of the patient while, in many other cases, the occurrence of pain is not related consistently to the increased effort or other causes. For this reason and the many others outlined the diagnosis of coronary insufficiency may be difficult to establish. Any objective method which would help the clinician to confirm or exclude a diagnosis of insufficient coronary circulation would be of immediate interest.

Levy and his associates<sup>1</sup> introduced a standardized test to aid in the diagnosis of coronary insufficiency. The principle of the "anoxemia test" consists of permitting the patient to breathe a mixture of 10 per cent oxygen and 90 per cent nitrogen for twenty minutes or until cardiac pain appears. The criteria for a positive test are as follow:<sup>2</sup> (1) The arithmetic sum of the RS-T deviations in all four leads totals 3 mm. or more. (2) There is partial or complete reversal of the direction of the T wave in Lead I, accompanied by an RS-T deviation of 1 mm. or more in this lead. (3) There is complete reversal of the direction of the T wave in Lead 4F, regardless of RS-T deviation. (4) There is partial reversal of the direction of the T wave in Lead 4F, accompanied by an RS-T deviation of 1 mm. or more in

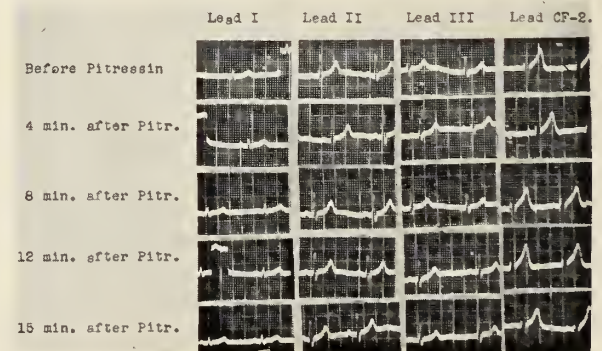


Fig. 1. Negative Pitressin test (case 1), "anxiety neurosis."

From the Department of Medicine and Cardiology, St. Mary's Hospital, Kansas City, Missouri.



this lead. "The test should not be performed in the presence of congestive heart failure, within four months after known cardiac infarction or on the same patient more than once in twenty-four hours."

Any one, or any combination of the criteria described indicates a positive test and is regarded as a sign of coronary insufficiency; a negative test does not exclude the diagnosis. Pain during the test with a negative electrocardiographic result is regarded as presumptive evidence of a diminished coronary reserve.

In 1942 Levy and his associates<sup>3</sup> discarded the fourth criterion, with the following statement: "The combination of partial T wave reversal and RS-T deviation of 1 mm. or more in Lead 4F as the sole criterion of a positive test was observed in less than 2 per cent of the cases of coronary sclerosis and was found with equal frequency in normal persons. Its use as a sign of a positive reaction has therefore been discontinued."

Levy, Patterson, Clarke and Bruenn,<sup>4</sup> in 1941, studied 137 patients, of whom twenty-five were normal controls. Positive reactions were not observed in any patient without cardiac disease or severe anemia. The authors observe that "the test is simple and safe, that there have been no serious effects, and that the course of the disease has not been affected unfavorably as the result of repeated tests."

Patterson, Clark and Levy,<sup>3</sup> in 1942, observed no positive tests in 136 normal individuals. In 157 cases of coronary sclerosis, the test was positive objectively in 49.0 per cent, and presumptively positive (pain) in another 20.0 per cent. Master, Nuzie, Brown and Parker,<sup>5</sup> in 1944 used the anoxemia test as a check on the Master "two step" exercise test. They concluded that the electrocardiographic changes corresponded almost exactly in both tests.

Another simpler method to test the efficiency of the coronary circulation was introduced by Ruskin.<sup>6</sup> He used Pitressin, which has been shown to be one of the most powerful vasoconstrictors, to aid in the differentiation of angina pectoris from

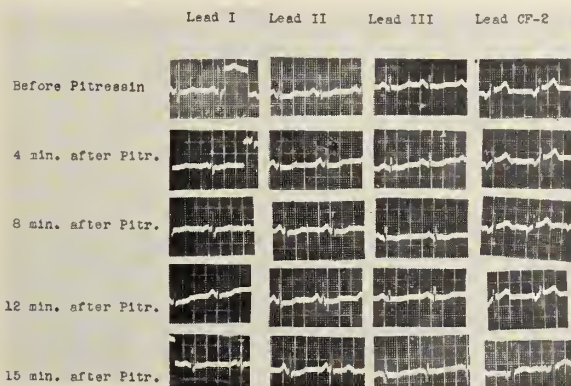


Fig. 2. Positive Pitressin test (case 2). Upright T-1 changes to a flat wave. Positive T-4 changes to a diphasic wave (criteria No. 2). In addition T-3 becomes flat and Q-3 is deeper after Pitressin injection. "Insufficient coronary circulation."

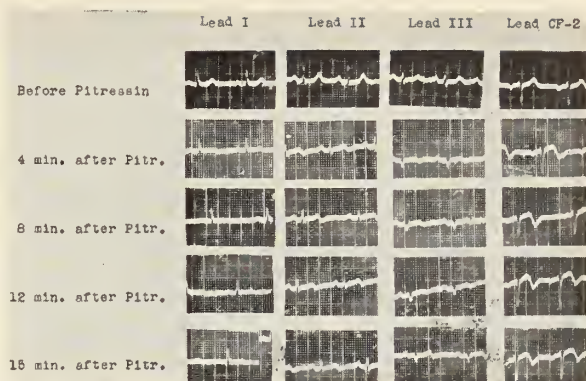


Fig. 3. Positive Pitressin test (case 3). T-1 becomes flat, T-2 diphasic, T-4 inverted (criteria No. 2). "Insufficient coronary circulation."

other conditions associated with chest pains. Again a close parallelism between this test and the Master exercise test in both the positive and negative cases was noted.

To evaluate the diagnostic efficacy and the safety of the "Pitressin test" the present study was undertaken.

#### MATERIAL

The Pitressin test was performed on twenty cases. The present analysis is based on the result of the tests in these cases. The patient's history and physical findings preceding the test suggested coronary insufficiency in all cases. Patients with recent myocardial infarction or congestive heart failure were excluded.

#### METHOD

An empty stomach was a useful but not necessary prerequisite to the test. A subject of average weight was given 2 cc. (40 Pressor units) of Pitressin intramuscularly in the forearm; dosages were adjusted according to weight deviation. Four pressor units were added or subtracted respectively for each 10 pounds above or below 70 kilograms. If precordial pain or other discomfort occurred before the test was completed a tourniquet was applied above the area of injection to slow absorption of Pitressin and the patient was given Seconal 0.1 gm., which was found satisfactory in controlling the side reactions (burning, gagging, intestinal cramping, urgency to void and defecate) or nitroglycerin to control chest pain, or both. If the discomfort was severe, the test was terminated. No intravenous injection was used in this series. The test was performed under basal conditions. Electrocardiograms were made before injection of Pitressin and 4, 8, 12 and 15 minutes after. Leads I, II, III and CF-2 were employed with the patient in the horizontal position.

#### CRITERIA OF A POSITIVE TEST

The test is considered positive if one of the following criteria is met:

1. The arithmetic sum of the RS-T deviations in all four leads is 3 mm. or more.



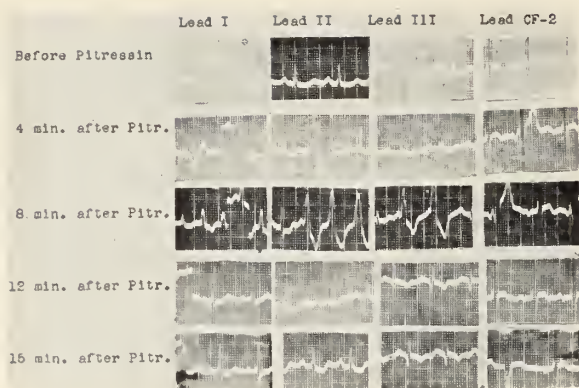


Fig. 4. Positive Pitressin test (case 4). The arithmetic sum of the RS-T deviations in all four leads is 3 mm. or more (criteria No. 1). Many extrasystoles of ventricular origin occur after Pitressin injection. "Insufficient coronary circulation."

2. A positive T-1, T-2 or T-4 changes to a flat, diphasic or negative wave.

#### MATERIAL

The Pitressin test was performed on twenty cases. Symptoms or physical findings were suggestive of coronary insufficiency in all cases but the diagnosis was not definitely established prior to the performance of the Pitressin test. The test was not performed in the presence of heart failure or in a suspected case of coronary occlusion.

#### RESULTS

The twenty cases studied gave five positive electrocardiographic tests. Two of these five cases in addition developed substernal discomfort within five minutes after injection of Pitressin. Fifteen gave negative tests. Ten patients in this group had hypertension; the test was positive in four of these.

#### UNPLEASANT SYMPTOMS

Dizziness, dyspnea, anxiety and chest pain occurred in four patients. Although the reactions were not severe it was deemed wise to terminate the observation. Ten patients developed an urgency to defecate and urinate before the test was completed. All unpleasant symptoms were controlled by the Seconal 0.1 gm. or nitroglycerin sublingually.

#### COMMENT

The usefulness of the Pitressin test in differential diagnosis is illustrated by the following case:

#### REPORT OF CASE

Case 1. H. B., a man aged 30 was admitted to the emergency ward of the hospital with severe substernal pain radiating into both arms. Examination revealed a blood pressure of 100 systolic and 60 diastolic in both arms; pulse 100, regular. The heart was not enlarged. Throughout the examination the patient was extremely restless and complained of severe pain in the chest and arms. An electrocardiogram at the time of admission was negative with the exception of low QRS voltage in the limb leads. A chest roentgen ray also was reported

normal. Sublingual nitroglycerin gave no relief. He then was given morphine grs.  $\frac{1}{4}$  hypodermically. The pain soon disappeared and the patient went to sleep. Next morning a Pitressin test was performed (fig. 1). The results were normal. Further studies revealed that the patient was suffering from an "anxiety neurosis."

The Pitressin test was helpful in eliminating the possible diagnosis of coronary artery disease.

Exhaustive studies of the other fourteen cases, which showed negative Pitressin tests revealed: six cases with hypertension, one case with mitral stenosis, two cases with tachycardia and soft blowing apical systolic murmur, two cases with neuro-circulatory asthenia, two cases with severe secondary anemia and one case with marked sinus arrhythmia. In this group of negative tests two patients, one with hypertension and one with anemia, developed chest pain before completion of the test. This was not considered presumptive evidence of coronary insufficiency, but this type of response should be followed for more definite signs of coronary artery disease and their management should be conservative.

The following five cases, with their accompanying graphs illustrate the positive results:

#### REPORTS OF CASES

Case 2. J. O., a man aged 35, a farmer, complained of dyspnea on exertion. His weight was 235 pounds. Blood pressure was 180/100. He had been a heavy smoker. There was left ventricular hypertrophy and no physical signs of cardiac failure. The Pitressin test (fig. 2) gave positive results (criteria No. 2).

Case 3. M. K., a woman, aged 78, housewife, complained of chest pain, not aggravated by exertion. Her weight was 135 pounds. Blood pressure was 160/90 with normal physical findings. The Pitressin test (fig. 3) was positive (criteria No. 2).

Case 4. R. R., a woman 50 years old, housewife, complained of tightness in the chest, aggravated by exertion, also present at rest. Weight was 127 pounds. She had had a thyroidectomy five years previously, hysterectomy and oophorectomy (?) fifteen years previously. Blood pressure was 170/84. Pitressin test (fig. 4) was positive (criteria No. 1).

Case 5. R. M., a man aged 50 years, had been a stone-cutter and polisher for the last fifteen years. He complained of pain in the chest, wheezing and cough for the last five years, and pain in the left arm. Blood pressure was 120/74. Chest roentgenogram: "Silicosis, emphysema." Pitressin test (fig. 5) was positive (criteria No. 2). This patient developed anxiety and marked pain in the left arm five minutes after the injection of Pitressin. He was given Seconal 0.1 gm. The test was terminated and he made an uneventful recovery.

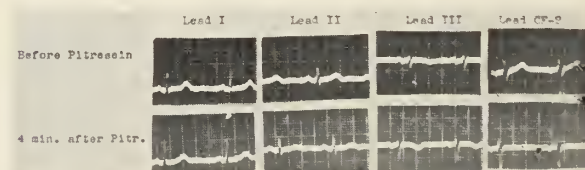


Fig. 5. Positive Pitressin test (case 5). T-2 and T-4 change to a flat wave (criteria No. 2). In addition T-3 becomes more negative. The test was terminated 5 minutes after the injection of Pitressin because the patient developed anxiety and pain in the left arm. "Insufficient coronary circulation."

## BRONCHIAL ASTHMA

"Aminophyllin has in recent years taken a definite place in the armamentarium of asthmatic medication. Physiologically it acts by relaxing the bronchial muscles. It is also extremely valuable in relieving patients of an adrenalin fastness and is less contraindicated in cases with cardiac disorders or hypertension."<sup>1</sup>

By relaxing the bronchial musculature, improving ventilation, increasing vital capacity and promptly reducing both intrathecal and venous pressures,

SEARLE

# AMINOPHYLLIN\*

exerts a favorable influence on the rate and volume of respiration in bronchial asthma as well as in paroxysmal dyspnea and Cheyne-Stokes respiration.

ORAL... PARENTERAL... RECTAL  
DOSAGE FORMS

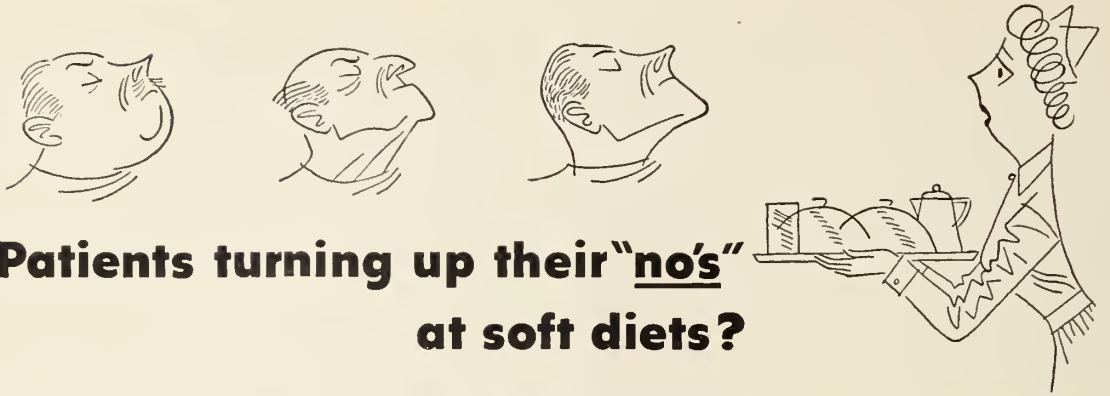


\*Searle Aminophyllin contains at least 80% of anhydrous theophylline. G. D. Searle & Co., Chicago 80, Illinois.

**SEARLE** RESEARCH IN THE SERVICE OF MEDICINE

1. Mountain, G. E.: Bronchial Asthma, J. Iowa M. Soc. 35:324 (Aug.) 1945.





## Patients turning up their "no's" at soft diets?



## Try tasty, protein-rich Swift's Strained Meats!

### *A palatable, natural source of complete, high-quality proteins*

It's not surprising that soft-diet patients develop appetite-apathy. The things they have to eat!

To help overcome this anorexia many doctors now recommend Swift's Strained Meats. Delicious, *real* meat that patients on soft, smooth diets can eat and *enjoy*. Swift's Strained Meats provide an excellent base for high-protein, low-residue diet. Rich in iron, they're chemically and physically non-irritating. They make available *simultaneously* all essential amino

acids for optimum protein synthesis.

Swift's Strained Meats are tasty enough to tempt tired appetites. They supply goodly amounts of B vitamin to help stimulate patients' natural appetite for other foods. Swift's Strained Meats are 100% meat—a variety of six kinds: beef, lamb, pork, veal, liver, heart. Originally prepared for infant feeding, they're exceptionally fine in texture—may easily be used in tube feeding. Convenient—ready to heat and serve.



**6 varieties:**  
Beef, lamb, pork,  
veal, liver, heart



For patients who can take foods of less fine consistency—Swift's Diced Meats offer tender morsels of nutritious meats with tempting flavors patients appreciate.

The makers of Swift's Strained Meats invite you to send for your copy of "The Importance of Protein Foods in Health and Disease"—a physicians' handbook of protein feeding, written by a doctor. Send to:

## SWIFT & COMPANY

Chicago 9, Illinois



All nutritional statements made in this advertisement are accepted by the Council on Foods and Nutrition of the American Medical Association.



Case 6. P. L., a man, aged 56, retired, complained of chest pain aggravated by effort. His weight was 150 pounds. Blood pressure was 180/110, pulse 60 and regular. He had mild dyspnea on exertion. Electrocardiogram showed left bundle branch block. Pitressin test (fig. 6) was positive (criteria No. 1). This patient complained of increasing chest pain six minutes after injection of Pitressin, necessitating termination of the test. Nitroglycerin grs. 1/150 given sublingually gave relief within five minutes and no further difficulties were encountered.

#### COMMENT

An attempt was made to evaluate the Pitressin test for coronary insufficiency as to its diagnostic efficacy and safety. The clinical material analyzed in this report includes cases in which the existence of coronary insufficiency was not established or excluded. Electrocardiographic criteria Nos. 1 and 2 were used and precautions as previously outlined were followed.

In this small series of cases two patients, in which the Pitressin test was positive, developed pain before the test was completed. Two of the cases with negative tests complained of substernal discomfort after injection of Pitressin. For the present, I am not inclined to regard a negative reaction with pain as presumptive evidence of coronary insufficiency. It appears, however, that some significance may be attached to a test which gives electrocardiographically negative results but during which pain appears.

I consider the test an office procedure with the technician or the physician in constant attendance upon the patient.

The twenty cases studied gave fifteen negative and five positive results. All patients in this series had either definite or indefinite chest pain. While a negative electrocardiographic Pitressin test does not rule out coronary artery disease, a positive test affords conclusive evidence of coronary insufficiency.

#### SUMMARY AND CONCLUSIONS

1. The Pitressin test was performed in 20 cases. In all cases some clinical evidence of coronary artery disease existed, although in none of these

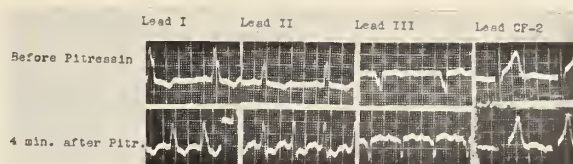


Fig. 6. Positive Pitressin test (case 6). Left bundle branch block. The arithmetic sum of R-S-T deviation in Lead I and Lead II is 3 mm. (criteria No. 1). Five minutes after injection of Pitressin tachycardia developed and the patient complained of increasing chest pain. The test was terminated. "Insufficient coronary circulation."

cases could this diagnosis have been made on the basis of clinical evidence alone.

2. Twenty-five per cent (5 cases) of the 20 cases gave positive objective (electrocardiographic) tests. Seventy-five per cent (15 cases) gave negative tests.

3. A positive reaction was not observed in any patient without cardiac disease.

4. Pain unattended by significant electrocardiographic changes occurred twice in this series. Pain occurring during a positive test affords added evidence of coronary insufficiency.

5. A positive test affords conclusive evidence of coronary insufficiency, a negative test does not exclude it.

6. Within the limits described we consider the test safe and simple. The reactions are readily relieved by Seconal and Nitroglycerin or Nitroglycerin.

7. The test is of definite help in the differential diagnosis of conditions producing chest pain.

#### BIBLIOGRAPHY

1. Levy, R. L.; Barach, A. L., and Bruenen, H. G.: Effects of Induced Oxygen Want in Patients with Cardiac Pain, *Am. Heart J.* 15:187-200 (Feb.) 1938.
2. Levy, R. L.; Williams, N. E.; Bruenen, H. G., and Carr, H. A.: The "Anoxemia Test" in the Diagnosis of Coronary Insufficiency, *Am. Heart J.* 21:634 (May) 1941.
3. Patterson, J. E.; Clark, T. W., and Levy, R. L.: A Comparison of Electrocardiographic Changes Observed During the "Anoxemia Test" on Normal Persons and on Patients with Coronary Sclerosis, *Am. Heart J.* 23:837-846 (June) 1942.
4. Levy, R. L., Patterson, J. E., Clark, T. W., and Bruenen, H. G.: The "anoxemia Test" as an Index of the Coronary Reserve, *Jr. Am. Med. Assoc.* 1941 CXVII, 2113.
5. Master, A. M., Nuzie, S., Brown, R. C., and Parker, R. C., Jr.: The Electrocardiogram and the "Two Step" Exercise: a Test of Cardiac Function and Coronary Insufficiency, *Am. J. Med. Sci.*, 1944 CCVII, 435.
6. Ruskin, A.: Pitressin Test for Coronary Insufficiency, *Am. Heart J.* 34:569-579, 1947.

#### NATIONAL CONFERENCE ON RURAL HEALTH TO BE HELD IN CHICAGO

The fourth annual National Conference on Rural Health will be held at the Palmer House, Chicago, Friday, February 4, and Saturday, February 5, 1949.

More than 600 representatives of child health groups, farm groups, state rural health committees, medical schools, the National Health Council, the United States Public Health Service, and other organizations will attend.

The conference is sponsored by the Committee on Rural Health of the American Medical Association in cooperation with national farm organizations.

Purpose of the meeting is to study such factors in rural environment as farm hygiene, farm sanitation, nutrition of farm families, farm hazards, health care in rural towns, and the establishment and activities of rural health councils.

Speakers at the conference include Dr. George F. Lull, Chicago, secretary and general manager of the

American Medical Association; Mrs. J. Laning Taylor, educational director of the National Cooperative Milk Producers' Federation, Washington, D. C.; Mrs. Gladys T. Edwards, director of education, Farmers Educational and Cooperative Union of America, Denver, Colorado; and H. E. Slusher, chairman, Medical Care Committee, American Farm Bureau Federation, Jefferson City, Missouri.

Round table discussions will present information about cooperative health programs for rural areas, environmental hazards, health education, the general practitioner in rural practice, and nutrition.

The conference will close with a luncheon at 1 p. m. Saturday, February 5, at which Dr. Roscoe L. Senserich of South Bend, Indiana, president of the American Medical Association, and Dr. John O. Christianson, superintendent of the School of Agriculture, University of Minnesota, St. Paul, will speak.

# ROENTGEN THERAPY

PRESENT CONCEPT

DAVID S. DANN, M.D., *Kansas City*

## HISTORY

ROENTGEN RAYS occupy, today, an important place in the treatment of cancer and more than four hundred other diseases.

The possibility that roentgen rays could influence living tissue was recognized soon after the discovery of roentgen rays in 1895. It is difficult to assign priority in this recognition, but two authenticated episodes seem to have emerged. About 1896, a young girl went to Dr. Leopold Freund of Vienna for treatment of a large hairy nevus. Recalling that Dr. J. Daniel of Vanderbilt University had reported loss of hair from the scalp of a patient whose skull he had roentgen rayed, Dr. Freund applied roentgen rays in the treatment of the hairy nevus.

About the same time E. H. Grubbe, a manufacturer of roentgen ray tubes in Chicago, developed dermatitis of the hands. He showed this to Dr. Gilman who associated this reaction with the effect of roentgen rays. Roentgen rays then were employed in the treatment of cancer with an occasional good result. However, it was difficult to reproduce these good results because of technical difficulties, principally due to lack of available means of accurate dosage measurement. Furthermore, one physician could not transmit to another with accuracy the exact conditions under which he had obtained beneficial results.

## MEASUREMENT OF DOSAGE

During the early period many attempts were made at measurement of roentgen rays—chemical, photographic, fluorescent and biologic—but, with variable success. The biologic consisted in determining the amount of radiation which would cause epilation or an erythema of the skin. This epilation or erythema dose is still employed, but now can be translated into accurate physical measurements.

Among the early attempts at accurate physical measurements, the method of Shearer received considerable recognition. In 1915, he expressed variation in dosage with physical factors in terms of a formula:

$$\text{Dose of radiation} = \frac{\text{Milliamperes} \times (\text{kilovoltage})^2 \times \text{time}}{(\text{distance})^2}$$

But this formula does not take into account various wave forms of different machines, filter, areas exposed and such.

Recognizing that progress could not be made in radiation therapy until a satisfactory unit of measurement was established, the physicists finally adopted a unit at the Fifth International Congress of Radiology in Chicago in 1937. The basis of measurement was the ionizing effect of radiation on air, causing a change in electrical conductivity. Reduced to its simplest terms, the International Unit of Radiation, roentgen r or gamma r, is that quantity of radiation which will produce in one cubic centimeter of air at 0 centigrade and 760 millimeters mercury pressure, one electrostatic unit of charge.

With this as a basis, such biologic effects as the erythema dose can now be translated into exact physical terms of the international r-unit. Further, through the researches of Friedrich and Glasser, one can determine the dose in r-units delivered to the depth of a tumor. Using an ionization chamber which they devised, they made measurements on the surface and at various depths in a water phantom, since water has a coefficient of absorption similar to tissue. They constructed charts demonstrating points of equal dosage in depth-isodose charts. Knowing the approximate depth of the tumor in the body, these isodose charts can be applied to a cross section of the body at that level and the tumor dose determined.

Taking carcinoma of the cervix as a practical example of using such isodose charts, a cross section of the pelvis is obtained by molding a lead soldering wire, or a similar device, to the pelvis and then transferring it to paper. By applying the isodose chart directly to the outline, the dose of roentgen rays in roentgens (r-units) delivered through the pelvis from four to six portals can be calculated.

Similar calculations can be made to determine the dose from radium in and about the cervix, in gamma r, by using radium isodose charts.

While discussing the measurement of depth dose, it is of interest to digress briefly to consider the relative value of ordinary high voltage roentgen rays (200,000-250,000) versus supervoltage (700,000-1,000,000). Simply stated, it will require more portals of entry with the former to deliver a certain tumor dose into the depth of the tissues than the latter. There is also less reaction to the skin and overlying tissues with supervoltage. Aside from this, there is little relative advantage. No specific superiority of supervoltage over high voltage from difference in quality of radiation has been proved. It does not follow, as is sometimes inferred, that results obtained with 400,000 volts are twice as good as 200,000; or 1,000,000, five times 200,000. As Chamberlain has so aptly stated—"there is no magic in a million volts."

From the Department of Radiology, Menorah and Kansas City General Hospital. Lecture to residents and interns.





by far the most potent  
**ORAL ESTROGEN**  
available clinically

In exceedingly minute doses—as little as 0.02 mg. (1/3200 gr.) daily—ESTINYL\* maintains the average menopausal patient free of symptoms. Even when initiating therapy and in the more severe cases, unusually small dosage—measured in hundredths of a milligram—has been found effective.

**ESTINYL**



(ETHINYL ESTRADIOL)

ESTINYL, a derivative of the ovarian follicular hormone, estradiol, evokes the sense of well-being characteristic of natural hormone therapy. It acts rapidly, often completely controlling climacteric symptoms within a few days. In therapeutic dosage side effects are notably infrequent. Unique response to minimal dosage permits effective estrogen therapy at low cost to patients.

**DOSAGE:** One ESTINYL Tablet (0.02 mg.) or one teaspoonful of ESTINYL LIQUID (0.03 mg.) daily, may be prescribed, reducing dosage as symptoms subside.

**ESTINYL** Tablets, 0.02 (buff) or 0.05 mg. (pink), in bottles of 100, 250 and 1000.

**ESTINYL** LIQUID, 0.03 mg. per 4 cc. (teaspoonful), in bottles of 4 and 16 oz.

\*®

*Schering*

CORPORATION • BLOOMFIELD, NEW JERSEY  
IN CANADA, SCHERING CORPORATION LIMITED, MONTREAL

ESTINYL



## BASIC BIOLOGIC CONCEPTS

Knowledge of the physical aspects of radiation have emerged rapidly from empiricism to a scientific basis, but no such progress has been made in the biologic concepts. Certain fundamental concepts, however, have been established.

Primarily, tissues are affected by radiation through the transfer of energy with the production of ionization. Biochemical and biophysical changes initiated by ionization are responsible for the various reactions induced in tissue. This holds true whether the source of radiation is roentgen rays, gamma rays of radium, alpha particles, beta particles, neutrons or radioactive isotopes. The radiation reaction may be threefold: direct, indirect and constitutional. Devitalization of cancer cells may occur from a direct local effect manifested histologically by pyknosis and karyolysis of the nucleus, vacuolization and swelling of the cytoplasm. The indirect local reaction is characterized by endarteritis (fibrosis and hyalinization of the vessel wall), hyalinization and fibrosis increased in the connective tissue. This indirect effect is of great importance in the destruction of cancer. As Warren points out "after the usual dose of irradiation there is partial or complete recovery of some tumor cells, and if it were not for concomitant effects on connective tissue and blood vessels, no lasting effect would be noted."

## RADIOSENSITIVITY AND RADIORESISTANCE

Histologic study of irradiated tissue gave rise to another fundamental concept, namely, radiosensitivity and radioresistance. This concept arose soon after the discovery of roentgen rays through the observations that radiation could destroy certain cancer cells while leaving the surrounding normal tissue intact. In 1906, Regaud and his coworkers at the Curie Institute of Paris were the first to put these observations on an experimental basis. They chose the testicles of animals for this experiment because in many respects the spermatogonia resemble the cells of cancer. They were embryonal in character, showed active mitosis and presented alternating phases of rapid cell division and rest. Moreover, the testicle was in an isolated organ that could be irradiated easily and studied. They found that radiation destroyed the spermatogonia but left the surrounding supporting tissue intact; in addition, they noted that the spermatogonia were most sensitive during the stage of rapid cell division. From these experiments arose the concept that immature embryonic cells and cells in a state of active mitosis and rapid multiplication were most radiosensitive, while cells not possessing these characteristics were least radiosensitive, the law of Bergonie and Tribondeau. The attempt has been made since the discovery of this law to apply it without reservation to every tumor in the human body. Unfortunately, the problem is not so simple. While it has been found true that such rapidly multiplying and embryonic tumors or those of the

testicle, lymphomas and lympho-epithelioma of the tonsils are radiosensitive, there are equally embryonic tumors such as the melanotic tumors, osteogenic sarcoma and neurosarcoma that are not destroyed by irradiation, radioresistant. Moreover, one frequently sees patients with similar tumors of the mouth, breast or cervix, the same histologic and clinical type, each receiving identical treatment; in one is obtained complete destruction of all cancer cells (radiosensitive), while in another, the cancer cells persist (radioresistant). Thus, this law cannot be applied universally to differentiate the radiosensitive from the radioresistant tumors. It is for this reason that pathologists who attempt to use Broder's classification for this purpose encounter so many difficulties and contradictions.

It may be borne in mind, that, by a radiosensitive tumor is meant one that is destroyed by irradiation while leaving the surrounding normal tissues intact; a radioresistant tumor would require a dose that would destroy the normal tissues as well. In other words, radiosensitivity and radioresistance is a distinctly relative matter. Failla, physicist at Memorial Hospital, has expressed this concretely in the form of a ratio:

$$\text{Radiosensitivity ratio} = \frac{\text{Radiosensitivity of the tumor}}{\text{Radiosensitivity of the surrounding normal tissue}}$$

Radiosensitivity of the surrounding normal tissue

Thus, a tumor composed of cells which are destroyed more easily by a certain dose of radiation than the surrounding normal tissue has a high radiosensitivity ratio and is said to be radiosensitive; while one that requires a still larger dose has a lower radiosensitivity ratio—a less radiosensitive tumor; and finally, when the dose required to destroy a tumor equals that which will destroy the normal surrounding tissue, the radiosensitivity ratio is reduced to unity and the tumor is therefore radioresistant.

The radiosensitivity ratio has great practical significance for it not only clarifies the concept of radiosensitive tumors but points out the lines along which further experiments must be conducted to improve results with irradiation. It must be obvious from a study of this ratio that efforts must be directed toward those factors which will influence the radiosensitivity of each particular tumor and its surrounding normal tissue. The factors influencing the radiosensitivity of a tumor are biologic and physical. In certain tumors radiosensitivity is increased when the cells are immature, embryonic, undifferentiated (anaplastic), rapidly dividing, showing active mitosis and have a high metabolic rate. But, as has been previously pointed out, this is not true for all tumors. The converse of these characteristics tends to decrease radiosensitivity, namely, mature, undifferentiated (desmoplastic), resting cells showing lack of mitosis and a low metabolic rate. Here again there



are exceptions. Observe such tumors as the mature squamous cell type in the oral cavity and cervix which are radiosensitive. Here, the anatomic location or the tissue of derivation is the all important factor which influences radiosensitivity. In this connection it is of interest to observe the relative radiosensitivity of normal tissues as recorded by Desjardin: (1) lymphoid cells (lymphocytes), (2) polymorphonuclear and eosinophilic leukocytes, (3) epithelial cells, (4) endothelial cells, (5) connective tissue cells, (6) muscle cells, (7) bone cells, (8) fat cells, (9) nerve cells. In general the various tumors derived from these tissues follow a similar order of radiosensitivity.

Glandular tumors, actively secreting cells and those embedded in dense fibrous tissue tend to be low in radiosensitivity. Poor nutrition, anemia and infection in the tumor tend to decrease its radiosensitivity.

The biologic factors tending to decrease the radiosensitivity of normal tissues are: good blood supply and nutrition, good constitution and histologic structure.

The physical factors which influence radiosensitivity are: dosage, intensity, time, filtration. All of these factors must be considered in order to deliver a devitalizing dose of irradiation to every tumor cell.

To illustrate the importance of the intensity and time factors, the further experiments of Regaud in 1922 on the testicles of animals are cited. He noted that 6000 r delivered in one massive dose to the testicles did not destroy all the spermatogonia. In addition, the skin in the anoscrotal region showed marked caustic effects with permanent damage. But, the same dose, divided into small fractions and given daily over a period of three weeks, destroyed all the spermatogonia and the skin in the anoscrotal region was only slightly injured and soon regained its normal integrity. The present so-called Coutard method of fractionated irradiation is based on these experiments.

Further study of the intensity and time factors is essential. While knowledge has been obtained concerning the influence of these factors on the skin erythema reaction and its recuperative period, little is known concerning the effects on other tissues. It is important to have similar knowledge concerning the recuperative periods of cancer cells and the surrounding tissues.

Another important factor to consider in the

radiosensitivity ratio is the reaction of the host, the genetic constitution of the individual. Two identical tumors may show entirely different reactions to the same amount of radiation. In the study that Dr. Robert Koritschoner and I made on pre-operative radiation of carcinoma of the breast we observed, for example, two individuals, each with tumors of identical size and histologic structure (medullary carcinoma), reacting differently to the same treatment. In one there was rapid shrinking of the tumor with almost complete destruction, relatively radiosensitive; while in the other there was only moderate reduction in size and little destruction, radioresistant.

In this connection, the experiments of Anna Goldfider are of great interest. She irradiated, *in vitro*, two histologically identical adenocarcinomas of the breast and then transplanted them into two strains of mice, dba and C<sub>3</sub>H. With a dose of 4500 r, the latent period was prolonged in the dba strain and 5000 r produced no takes. While in the C<sub>3</sub>H strain, 2600 r prolonged the latent period of takes, and 2700 r produced no takes. These experiments seemed to provide the explanation for the difference in response of two identical histologic tumors. They demonstrate the importance of the genetic make-up of the host, the constitutional factor. In addition, they emphasize the importance of studying the reaction to irradiation in each individual and regulating the treatment accordingly. Finally, while recognizing the importance of the radiosensitivity ratio, one must not confuse it with radio-curability. For example, lymphosarcoma may be radiosensitive and the involved glands shrink rapidly under radiation therapy, yet they may recur just as rapidly and the patient succumb to the disease. In other instances, a relatively radioresistant tumor may be cured by proper radiation technique. The size of the tumor and the technic employed, aside from radiosensitivity, plays an important role in radiocurability.

#### CONCLUSION

In conclusion, although the important role that radiation plays in the treatment of cancer is recognized, nevertheless, one must recognize that it, like surgery, is not the final answer to the cancer problem. While awaiting the final answer, it is necessary that radiologists, surgeons, pathologists and internists cooperate fully to give the patient the benefit of everything that present knowledge offers.

410 Professional Bldg.

## PRESIDENT'S PAGE

The Association has been invited by Governor Forrest Smith to appoint a committee to make a study of the state mental hospitals. The committee is to

report to Governor Smith the conditions found together with recommendations as to how best to correct any unsatisfactory methods.



The Association has long been interested in this problem of state government and welcomes this opportunity to help in arriving at a satisfactory solution.

The Committee is composed of the following members: Walter L. Moore, M.D., St. Louis; B. Landis Elliott, M.D., Kansas City, and Robert J. Mueller, M.D., St. Louis. The Committee had its first meeting in St. Louis on Sunday, January 16.

*Robert Mueller M.D.*



# COSMO CAUTERY COMPANY

4215 Virginia Ave. St. Louis 11, Mo.

Established 1936

## CERVIX COAGULATOR



Actual Size  $9\frac{5}{8}$  Inches

\$26.50  
Complete

## The Cervix Coagulator

For the treatment of endocervicitis, cervical cysts, cervical erosions, etc.

## The Cosmo Cautery Unit

For the removal of superficial skin blemishes such as warts, moles, skin tabs, etc.

Doctors report gratifying results with these compact, easy to operate units. Offer most gentle yet effective treatment. Patient discomfort at a minimum. Complete units include all parts illustrated and handsome leatherette covered carrying case.

## Outstanding Features

1. Compactness and simplicity of operation
2. Can be used on 110 AC or DC current
3. Fingertip control switch
4. Results free of stenosis and scar tissue
5. Work may be done in office
6. No anesthesia required
7. No sparks or cherry red heat
8. Interchangeable silver applicators
9. Controlled low heat, eliminating nauseating smoke and odor of searing tissue
10. Noiseless, no radio interference

These instruments are guaranteed for one year against defective material or workmanship by the Cosmo Cautery Co.

## COSMO CAUTERY UNIT



Actual Size  $6\frac{3}{8}$  Inches

\$22.50  
Complete

## Write Your Surgical Dealer For Descriptive Literature

A. S. ALOE CO.  
1813 Olive Street  
St. Louis, 3, Mo.

A. S. ALOE CO.  
Bryant Building  
Kansas City, Mo.

HAMILTON-SCHMIDT SURGICAL CO.  
215 North Tenth Street  
St. Louis, 1, Mo.

EDMUND F. HANLEY MEDICAL EQUIPMENT CO.  
1021 N. Grand Avenue  
St. Louis, 6, Mo.

CHARLES A. SCHMIDT INSTRUMENT CO.  
3689 Olive Street  
St. Louis, 8, Mo.

# *Facts About Conception Control*

Clinicians generally favor the use of an occlusive device supplemented by a sperm-immobilizing agent for optimum protection. However, authoritative studies have established that a high degree of protection is afforded by use of a jelly alone—provided that the jelly has rapid spermaticidal action together with adhesive and cohesive properties sufficient to provide a dependable barrier.

When dependence must be placed on the "jelly alone" method, there is no better product available than "RAMSES"\* Vaginal Jelly† because:

1. It provides rapid spermaticidal action.
2. It possesses dependable adhesive and cohesive properties—will not melt or run at body temperatures.
3. Direct-color photographs show that it will occlude the cervix for ten hours.

"RAMSES" Vaginal Jelly is available in regular and large-size tubes through all pharmacies.



†Active ingredients: Dodecathyleneglycol Monolaurate 5%; Boric Acid 1%; Alcohol 5%.



\*The word "RAMSES"  
is a registered  
trademark of  
Julius Schmid, Inc.

*gynecological division*

*Julius Schmid, Inc.*  
423 West 55th Street, New York 19, N. Y.  
quality first since 1883



# THE JOURNAL

of the

Missouri State Medical Association

623 Missouri Bldg. Telephone: Newstead 0404-05

Subscription . . . \$3.00 a year in advance

*Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent.*

JANUARY, 1949

## EDITORIALS

### ANNUAL SESSION

The Ninety-first Annual Session of the Association will be held in Kansas City, March 27 to 30, in the Municipal Auditorium. Luncheon and dinner meetings will be held in Hotel President.

The program which was based on requests from the membership of the Association appears in this issue of *THE JOURNAL*. The Committee on Scientific Work feels that the suggestions made give a program that is sufficiently varied that few physicians in the state will fail to find it of value and of interest.

Also in this issue appears information concerning Kansas City hotels. It is suggested that members make their reservations early and directly with the hotel at which they wish to be accommodated.

### AVERAGE AGE OF PHYSICIANS DECLINES

The average age of physicians in the United States is slightly less today than it was at the outbreak of World War II, according to a report by Frank G. Dickinson, Ph.D., Director of the Bureau of Medical Economic Research of the American Medical Association. The report appears in the January 1 issue of *The Journal of the American Medical Association*.

This age decrease reflects the "relatively large number of physicians trained since 1940," Dr. Dickinson says. Statistics are for all physicians in the United States, including interns, residents and doctors not in active practice. The median age of the 199,745 doctors of the nation is 44.4 years. In 1940 the median age for 175,146 doctors was 45.8 years.

The percentage of all physicians less than 50 years of age rose from 57.5 in 1940 to 60.2 in 1948. In the age group 35 to 49 the percentage rose from 31.4 to 36.5.

"The medical population has increased 14 per cent since 1940 while the total population of the country increased only 12 per cent," Dr. Dickinson points out. "Each new physician is destined to remain in the medical population approximately forty years."

The number of physicians and their median age for each state is given as follows: Alabama 2,227, 48.1; Arizona 794, 44.4; Arkansas 1,728, 55.2; California 16,045, 45.2; Colorado 2,216, 45.5; Connecticut 3,267, 42.8; Delaware 44, 43.6; Florida 2,925, 49.5; Georgia 3,126, 45.5; Idaho 470, 45.0; Illinois 13,320, 46.2; Indiana 4,404, 45.5; Iowa 2,934, 49.7; Kansas 2,206, 46.6; Kentucky 2,662, 48.7; Louisiana 3,080, 38.7; Maine 997, 49.8; Maryland 3,715, 40.4; Massachusetts 9,078, 42.9; Michigan 7,173, 43.8; Minnesota 4,290, 41.0; Mississippi 1,507, 52.9; Missouri 5,345, 47.5; Montana 539, 46.1; Nebraska 1,666, 49.2; Nevada 201, 49.3; New Hampshire 729, 44.9; New Jersey 6,578, 43.2; New Mexico 497, 46.9; New York 30,981, 43.8; North Carolina 3,367, 43.4; North Dakota 464, 48.5; Ohio 10,173, 44.4; Oklahoma 2,245, 50.9; Oregon 1,813, 44.2; Pennsylvania 14,742, 43.0; Rhode Island 1,034, 44.6; South Carolina 1,519, 45.9; South Dakota 515, 48.7; Tennessee 3,255, 44.8; Texas 7,863, 45.4; Utah 845, 40.5; Vermont 583, 43.3; Virginia 3,333, 44.5; Washington 2,774, 43.2; West Virginia 1,834, 47.7; Wisconsin 3,870, 44.8; Wyoming 253, 46.5; District of Columbia 4,118, 41.7.

Numbers of young physicians holding internships and residencies in metropolitan areas probably account for the lower median ages of physicians in thickly populated states, Dr. Dickinson indicates.

"The available supply of medical service cannot be measured by crude numbers of living physicians, since they include interns and residents still in training and physicians not engaged in the active practice of medicine. An adequate inventory of medical service must also include an evaluation of the contributions of the large force of technicians and medical assistants who enable the modern physician to render far more medical service than was possible only a decade ago."

An accurate analysis of medical service must await the completion of the medical service area study now being made by the Bureau.

## NEWS NOTES

C. Stewart Gillmor, M.D., Kansas City, was the guest speaker at an annual Christmas party of the Smith Clinic staff, Pittsburg, Kansas, on December 12. He spoke on "Common Forms of Rheumatism and Home Treatment."

Wallis Smith, M.D., Springfield, was a guest speaker at the annual installation of officers dinner meeting of the St. Louis County Medical Society on December 12.

R. E. Bruner, M.D., Kansas City, recently conducted a cerebral palsy clinic at Des Moines, Iowa, sponsored by the Iowa Society for Crippled Children.

Joseph C. Jaudon, M.D., St. Louis, was elected president of the Washington University Medical

Society at an annual session on December 8. A. N. Arneson, M.D., St. Louis, was elected a member of the council.

Frank D. Dickson, M.D., Kansas City, is in charge of the local committee on arrangements for a sectional meeting of the American College of Surgeons to be held in Kansas City February 11 and 12.

Robert E. Schlueter, M.D., St. Louis, was made Honorary Librarian for Life of the St. Louis Medical Society at the annual meeting of the Society held on January 4.

## MUSINGS OF THE FIELD SECRETARY

The American Medical Association through its Committee on Rural Health, in cooperation with the national farm organizations, is sponsoring the fourth annual meeting of the National Conference on Rural Health to be held at the Palmer House, Chicago, Friday and Saturday, February 4 and 5, 1949.

The purpose of the meeting is to study such factors in rural environment as farm hygiene, farm sanitation, nutrition of farm families, farm hazards, health care in rural towns and the establishment and activities of rural health councils.

One of the round table discussions on the program will center on "The General Practitioner in Rural Practice" emphasizing (a) Preparation for Rural Practice, (b) Facilities and (c) Other Factors.

Mr. H. E. Slusher, Jefferson City, Chairman, Medical Care Committee, American Farm Bureau Federation, will deliver one of four addresses. His title is "Health Programs of National Farm Organizations."

Mr. Chester Starr, Jefferson City, Director, Rural Health Service, Missouri Farm Bureau Federation, will serve as chairman of a sectional meeting on "Cooperative Health Programs for Rural Areas." This sectional meeting will take the form of a round table discussion stressing (a) Local Health Units, (b) Local Health Councils and (c) Cooperative Hospitals.

The three previous National Rural Health Conferences have found the participants rolling up their sleeves and dragging out into the open many of the knotty problems affecting rural health. Numerous divergent ideas have been presented and the arguments for and against some of these have

been stimulating. The fact that the medical profession and the farm groups are seated around the conference tables together, all putting their cards face up, would seem to indicate a clearing of the deck for cooperative, constructive action.

Granted that misunderstanding is responsible for many of man's troubles why should not some sort of motto as "Let's sit down and talk it over" be more universally stressed.

## DEATHS

**Ewerhardt, F. H.**, M.D., St. Louis, a graduate of Washington University School of Medicine, 1910; Fellow of the American Medical Association; member of the St. Louis Medical Society; aged 71; died October 15.

**Bulkley, Clarence H.**, M.D., LaPlata, a graduate of the Keokuk Medical College, 1907; a Fellow of the American Medical Association; member of the Chariton-Macon-Monroe-Randolph County Medical Society; aged 65; died November 8.

**George, Charles A.**, M.D., Springfield, a graduate of Washington University School of Medicine, 1903; member of the Greene County Medical Society; aged 67; died November 19.

**Smith, Clinton K.**, M.D., Kansas City, a graduate of the University of Colorado School of Medicine, 1907; Fellow of the American Medical Association; Honor member of the Jackson County Medical Society; aged 65; died November 21.

**Doyle, William J.**, M.D., St. Louis, a graduate of Beaumont Hospital Medical College, 1901; Honor member of the St. Louis Medical Society; died November 21.

**Morley, Frank R.**, M.D., Sedalia, a graduate of the University Medical College of Kansas City, 1901; Honor member of the Pettis County Medical Society; aged 70; died November 25.

**James, Luther S.**, M.D., Blackburn, a graduate of the University of Missouri School of Medicine, 1907; member of the Saline County Medical Society; aged 72; died November 29.

**Smith, James E.**, M.D., Rolla, a graduate of the Tulane University of Louisiana School of Medicine, 1912; Fellow of the American Medical Association; member of the Phelps-Crawford-Dent-Pulaski County Medical Society; aged 60; died December 1.

**Meredith, Arnold L.**, M.D., Prairie Home, a graduate of Beaumont Hospital Medical College; Fellow of the American Medical Association; member and former president of the Cooper County Medical Society; aged 69; died December 7.

**Curdy, Robert J.**, M.D., Kansas City, a graduate of Washington University School of Medicine, 1895; Fellow of the American Medical Association; Honor member of the Jackson County Medical Society; aged 80; died December 15.

## ORGANIZATION ACTIVITIES

### MISSOURI STATE MEDICAL ASSOCIATION

#### 91st Annual Session, Municipal Auditorium, Kansas City

The Ninety-first Annual Session of the Association convenes at the Municipal Auditorium, Kansas City, Sunday, Monday, Tuesday and Wednesday, March 27, 28, 29 and 30, 1949. Dinner and luncheon meetings will be held at Hotel President.



**TIME AND PLACE OF MEETINGS**

**Sunday, March 27**

- 2:00 p. m. House of Delegates. Little Theatre, Municipal Auditorium.  
6:00 p. m. Dinner for Presidents and Secretaries of County Medical Societies. Hotel President.

**Monday, March 28**

- 9:30 a. m. Scientific Session. Little Theatre, Municipal Auditorium.  
2:00 p. m. Scientific Session. Little Theatre, Municipal Auditorium.  
4:30 p. m. House of Delegates. Little Theatre, Municipal Auditorium.  
7:30 p. m. Annual Banquet in Honor of Past Presidents. Hotel President.

**Tuesday, March 29**

- 9:30 a. m. Scientific Session. Little Theatre, Municipal Auditorium.  
2:00 p. m. Scientific Session. Little Theatre, Municipal Auditorium.

**Wednesday, March 30**

- 9:30 a. m. Scientific Session. Little Theatre, Municipal Auditorium.  
1:30 p. m. House of Delegates. Little Theatre, Municipal Auditorium.

**SCIENTIFIC PROGRAM OF GENERAL MEETINGS**

**Monday, March 28, 1949, 9:30 a. m., Little Theatre, Municipal Auditorium**

**Symposium on Coronary Disease**

- 9:30 a. m. Pathology of Coronary Artery Disease, Joseph T. Roberts, M.D., Little Rock, Arkansas.  
10:00 a. m. Electrocardiographic Changes in Coronary Disease, Paul S. Barker, M.D., Ann Arbor, Michigan.  
10:30 a. m. View of Exhibits. Arena, Municipal Auditorium.  
11:00 a. m. Acute Myocardial Infarction, Emmett B. Bay, M.D., Chicago.  
11:30 a. m. The Clinical Aspects of Chronic Coronary Disease, William I. Park, M.D., Springfield.  
2:00 p. m. Undulant Fever, W. W. Spink, M.D., Minneapolis.  
2:30 p. m. The Role of Psychiatry in General Medicine, Winfred Overholser, M.D., Washington, D. C.  
3:00 p. m. Modern Surgical Procedures for Carcinoma of the Colon and Rectum, Howard R. Mahorner, M.D., New Orleans.  
3:30 p. m. The Problem of Lung Cancer, Francis M. Woods, M.D., Brookline, Massachusetts.  
4:00 p. m. View of Exhibits. Arena, Municipal Auditorium.  
4:30 p. m. House of Delegates. Little Theatre, Municipal Auditorium.

**Tuesday, March 29, 1949, 9:30 a. m., Little Theatre, Municipal Auditorium**

- 9:30 a. m. Treatment of Diabetes Mellitus With Intermediate Insulin, Arthur R. Colwell, M.D., Evanston, Illinois.  
10:00 a. m. Genito-Urinary Surgery, John F. Patton, M.D., St. Louis.  
10:20 a. m. Surgical Treatment of Advanced Cancer, Everett D. Sugarbaker, M.D., Jefferson City.  
10:40 a. m. View of Exhibits. Arena, Municipal Auditorium.  
11:10 a. m. Gastric Pain.  
Medical Standpoint, A. C. Ivy, M.D., Chicago.  
Surgical Standpoint, J. Dewey Bisgard, M.D., Omaha.

**Symposium on Trauma**

- 2:00 p. m. George A. Aiken, M.D., Marshall, Moderator.  
Panel: J. Barrett Brown, M.D., St. Louis,  
A. P. Rowlette, M.D., Moberly,  
Jacob Kulowski, M.D., St. Joseph,  
F. A. Carmichael, Jr., M.D., Kansas City.  
3:15 p. m. View of Exhibits. Arena, Municipal Auditorium.  
3:45 p. m. F. L. Kneibert, M.D., Poplar Bluff, Moderator.  
Panel: David B. Robinson, M.D., Kansas City,  
Robert D. Duncan, M.D., Springfield,  
Fred A. Jostes, M.D., St. Louis,  
Edmund A. Smolik, M.D., St. Louis.

**Wednesday, March 30, 1949, 9:30 a. m., Little Theatre,  
Municipal Auditorium**

**Obstetric-Pediatric Symposium**

- 9:30 a. m. The Responsibility of the Physician in the Care of the Prema-

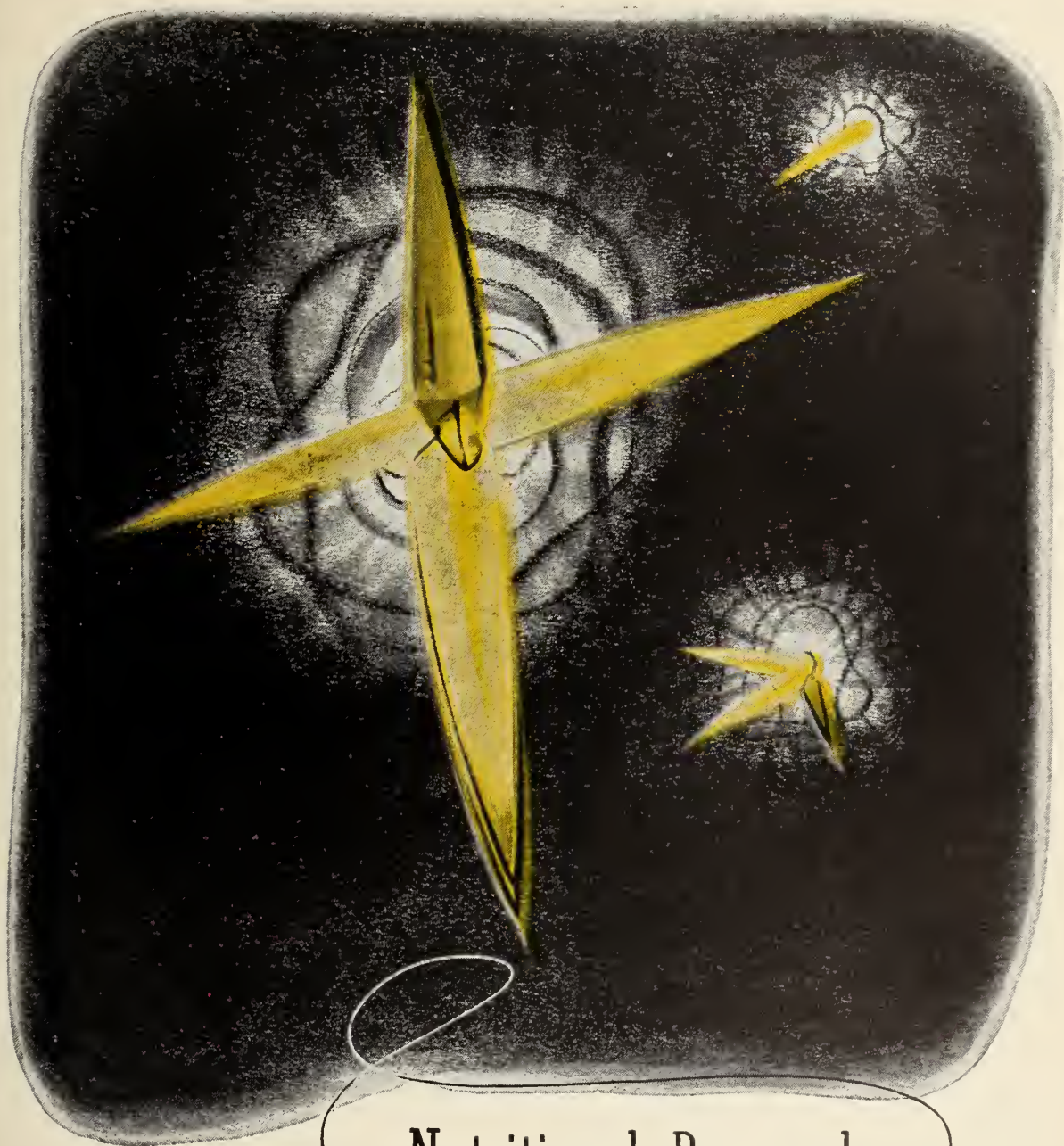
- ture Infant, Frank R. Lock, M.D., Winston-Salem, North Carolina.
- 10:00 a. m. Early Diagnosis of Diseases of the Newborn from the Obstetric Viewpoint, J. Milton Singleton, M.D., Kansas City.
- 10:20 a. m. Discussion: William See, M.D., Columbia,  
Don N. Morgan, M.D., Boonville.
- 10:30 a. m. View of Exhibits. Arena, Municipal Auditorium.
- 11:00 a. m. The Significance of Pathologic Changes in the Liver in Infantile Diarrhea, Peter G. Danis, M.D., St. Louis.
- 11:20 a. m. Discussion.
- 11:30 a. m. Hypoglycemic States in the Newborn, H. Ewing Wachter, M.D., St. Louis.
- 11:50 a. m. Discussion.

#### TECHNICAL EXHIBITS

##### Municipal Auditorium—Kansas City

- ABBEY RENTS, KANSAS CITY. BOOTH 14.
- ABBOTT LABORATORIES, NORTH CHICAGO. BOOTH 62.
- A. S. ALOE COMPANY, ST. LOUIS. BOOTH 84.
- AUDIPHONE COMPANY OF KANSAS CITY, INC., KANSAS CITY. BOOTH 48.
- BURROUGHS WELLCOME & Co., NEW YORK. BOOTH 24.
- BURT KRONE COMPANY, SPRINGFIELD, MO. BOOTH 83.
- CAMEL CIGARETTES, NEW YORK. BOOTH 70.
- CAMERON HEARTOMETER COMPANY, CHICAGO. BOOTH 73.
- CAMERON SURGICAL SPECIALTY COMPANY, CHICAGO. BOOTH 19.
- CARNATION COMPANY, OCONOMOWOC, WIS. BOOTH 54.
- CIBA PHARMACEUTICAL PRODUCTS, SUMMIT, N. J. BOOTH 46.
- COCA-COLA COMPANY, ATLANTA. BOOTHS 12 AND 13.
- DAIRY COUNCIL OF GREATER KANSAS CITY, KANSAS CITY. BOOTH .
- DOHO CHEMICAL CORPORATION, NEW YORK. BOOTH 40.
- DUMAS-WILSON & COMPANY, ST. LOUIS. BOOTH 21.
- ELI LILLY & COMPANY, INDIANAPOLIS. BOOTH 63.
- H. G. FISCHER & Co., FRANKLIN PARK, ILL. BOOTH 23.
- C. B. FLEET COMPANY, LYNCHBURG, VA. BOOTH 38.
- GOETZE NIEMER COMPANY, ST. JOSEPH. BOOTH 76.
- GREB X-RAY COMPANY, KANSAS CITY. BOOTH 75.
- GUILDCRAFTERS, HOLLYWOOD, CALIF. BOOTH 77.
- HOLLAND RANTOS COMPANY, NEW YORK. BOOTH 51.
- JONES METABOLISM EQUIPMENT Co., ST. LOUIS. BOOTH 20.
- LANTEEN MEDICAL LABORATORIES, CHICAGO. BOOTH 30.
- LEDERLE LABORATORIES, NEW YORK. BOOTH 32.
- LOV-E BRASSIERE COMPANY, HOLLYWOOD, CALIF. BOOTH 3.
- LUZIER'S INC., KANSAS CITY. BOOTH 7.
- MASSACHUSETTS INDEMNITY INSURANCE COMPANY, BOSTON. BOOTH 15.
- MEAD JOHNSON & COMPANY, EVANSVILLE, IND. BOOTH 8.
- MEDICAL PROTECTIVE COMPANY, FORT WAYNE. BOOTH 18.
- M & R DIETETIC LABORATORIES, INC., COLUMBUS. BOOTH 71.
- ORTHO PHARMACEUTICAL CORPORATION, RARITAN, N. J. BOOTH 9.
- PARKE DAVIS & COMPANY, DETROIT. BOOTH 5.
- PET MILK SALES CORPORATION, ST. LOUIS. BOOTH 69.
- PHILIP MORRIS & Co., NEW YORK. BOOTH 39.
- WM. P. POYTHRESS & Co., RICHMOND, VA. BOOTH 17.
- PRODUCERS CREAMERY COMPANY, SPRINGFIELD, MO. BOOTH 56.
- SANDOZ CHEMICAL WORKS, INC., NEW YORK. BOOTH 43.
- W. B. SAUNDERS COMPANY, PHILADELPHIA. BOOTH 2.
- G. D. SEARLE & COMPANY, CHICAGO. BOOTH 74.
- SHARP & DOHME, PHILADELPHIA. BOOTH 31.
- J. R. SIEBRANDT MANUFACTURING Co., KANSAS CITY. BOOTH 25.
- E. R. SQUIBB & SONS, NEW YORK. BOOTH 47.
- TESTAGAR & Co., INC., DETROIT. BOOTH 10.
- UNITED MEDICAL EQUIPMENT Co., KANSAS CITY. BOOTH 16.
- U. S. VITAMIN CORPORATION, NEW YORK. BOOTH 55.
- VANPELT & BROWN, INC., RICHMOND, VA. BOOTH 4.
- WESTWOOD PHARMACEUTICALS, BUFFALO. BOOTH 1.
- WINTHROP-STEARNES INC., NEW YORK. BOOTH 68.





CRYSTALS OF  
FOLIC ACID

## Nutritional Research

During the past several years, Lederle has made a very substantial investment in time and money for the investigation of nutritional deficiency states. The vast majority of such investigations lead down dead-end streets, but occasionally—and most fortunately for mankind—a brilliant result is achieved. One of the fields in which these efforts have proven, and are proving, successful is the field of nutritional macrocytic anemias. The first step in the conquest of this field was the

perfection of a practicable intramuscular liver extract by Lederle several decades ago. More recently, the Lederle-Cyanamid research team isolated and synthesized folic acid, which has been proven specific for the macrocytic anemias of sprue, infancy and childhood, pregnancy, gastrointestinal dysfunction, and pellagra. We are close to a solution of many other similar nutritional problems. FOLVITE\* Folic Acid *Lederle*, in various forms, is available for prescription use.

\*REG. U. S. PAT. OFF.

**LEDERLE LABORATORIES DIVISION** *AMERICAN Cyanamid COMPANY*  
30 ROCKEFELLER PLAZA • NEW YORK 20, N. Y.

**SOCIETY PROCEEDINGS****KANSAS CITY SOUTHWEST PEDIATRIC SOCIETY****The Children's Mercy Hospital****March 26, 1949, Kansas City, 9:00 a. m.**

The following program will be presented by the Kansas City Southwest Pediatric Society at the Children's Mercy Hospital in Kansas City on March 26, the day preceding the Annual Session of the Association. All members are invited to attend the program. The morning program will begin at 9:00 a. m. and the afternoon program will follow a luncheon at 12:00 noon.

**Morning Program**

Nephritis, R. C. Jefferies, M.D., Kansas City.  
Kerosene Intoxication, F. A. Cornwell, M.D., Kansas City.  
Diseases of the Newborn, Robert Henry, M.D., Kansas City.  
Fluid Administration, S. F. Cockerell, M.D., Kansas City.  
Hemangiomas, J. H. Gaskins, M.D., Kansas City.  
BAL in Acrodynia, W. H. Crouch, M.D., Kansas City.  
Enuresis, C. J. Eldridge, M.D., Kansas City.  
Bone Tumors, David Francisco, M.D., Kansas City.  
Osteomyelitis, C. L. Francisco, M.D., Kansas City.  
Rheumatoid Arthritis, N. S. Pickard, M.D., Kansas City.  
Poliomyelitis, F. S. Hogue, M.D., and R. H. Liene, M.D., Kansas City.  
Pediatric Gynecology, J. P. Farney, M.D., Kansas City.  
Routine of Southard School, Vernard Hall, M.D., Topeka, Kansas.  
Psychiatry in Children, Albert Preston, M.D., Kansas City.  
Organic Neurologic Lesions, A. T. Steegman, M.D., Kansas City.  
Problems, Thomas Draney, Jr., M.D., Kansas City.  
Diabetes in Children, David Howard, M.D., Kansas City.  
Hernias, J. G. Montgomery, M.D., Kansas City.  
Appendicitis, E. O. Parsons, M.D., Kansas City.  
Intestinal Obstruction, W. W. Greene, M.D., Kansas City.  
Pyloric Stenosis, Richard Twyman, M.D., and E. A. Wilkinson, M.D., Kansas City.  
Movie on Epiphysitis by Joseph Brennanem.

**Afternoon Program**

Diphtheria, J. M. Kantor, M.D., Kansas City.  
Pathologic Review, E. C. H. Schmidt, M.D., Kansas City.  
Ocular Diseases of Childhood, W. R. Eubank, M.D., and A. J. Baer, M.D., Kansas City.  
Immunization, W. Roger Moore, M.D., St. Joseph.  
Infant Feeding, Urban Busick, M.D., Springfield.  
Skin Cancer in Children, David Morgan, M.D., Kansas City.  
Rheumatic Fever, Don Carlos Peete, M.D., Kansas City.  
Congenital Heart, Postoperative, John Mayer, Jr., M.D., and H. M. Gilkey, M.D., Kansas City.  
Electrocardiogram, Lawrence Steffen, M.D., Kansas City.  
Pyelitis, Hjalmar E. Carlson, M.D., Kansas City.  
Histoplasmosis, Michael Furculow, M.D., Kansas City.  
Pediatric Emergencies, George Stafford, M.D., Lincoln, Nebraska.  
Diarrhea in the Newborn, D. R. Davis, M.D., and Paul Ensign, M.D., Emporia, Kansas.

**FIRST COUNCILOR DISTRICT****H. E. PETERSEN, ST. JOSEPH, COUNCILOR**  
**Grundy-Daviess County Medical Society**

The Grundy-Daviess County Medical Society met on November 30.

The following officers were elected: President, Joseph M. Quisito, M.D., Trenton; vice president, E. J. Mairs, M.D., Trenton; secretary and treasurer, E. A. Duffy, M.D., Trenton; delegate (Grundy County), E. A. Duffy, M.D., Trenton; alternate, William A. Fuson, M.D., Trenton; (Daviess County), Edward E. Nixon, M.D., Gallatin; alternate, Fred K. Wilson, M.D., Winston.

E. A. DUFFY, M.D., Secretary.

**Harrison County Medical Society**

Twenty-five physicians from Caldwell-Livingston, Carroll, Clinton, Grundy-Davies, Harrison, Linn, Mercer and Ray County medical societies attended a joint dinner meeting at the Strand Hotel, Chillicothe, on December 16.

B. Landis Elliott, M.D., Kansas City, gave a practical discussion on "The Diagnosis and Treatment of Early Neurosis."

The meeting was sponsored by the Harrison County Medical Society and presided over by W. A. Broyles, M.D., Bethany, president.

H. E. PETERSEN, M.D., Councilor.

**EIGHTH COUNCILOR DISTRICT****W. S. SEWELL, SPRINGFIELD, COUNCILOR****Barton-Dade County Medical Society**

The Barton-Dade County Medical Society met at Lamar on December 16.

Vern T. Bickel, M.D., Lamar, discussed "Gallbladder Disease" and showed a film on "Classical Cholecystectomy" by Phil Thorex, M.D., Chicago.

The following officers were elected: President, Rudolf Knapp, M.D., Golden City; vice president, Edmond Guldner, M.D., Lamar; secretary-treasurer, Vern T. Bickel, M.D., Lamar; delegate (Barton County), Claude E. Duckett, M.D., Lamar; alternate, Vern T. Bickel, M.D., Lamar; (Dade County), Alvin R. Cain, M.D., Greenfield; alternate, Watt O. Cowan, M.D., Greenfield.

Two new members, Herbert M. Arnold, M.D., Lamar, and Alvin R. Cain, M.D., Greenfield, were welcomed into the Society.

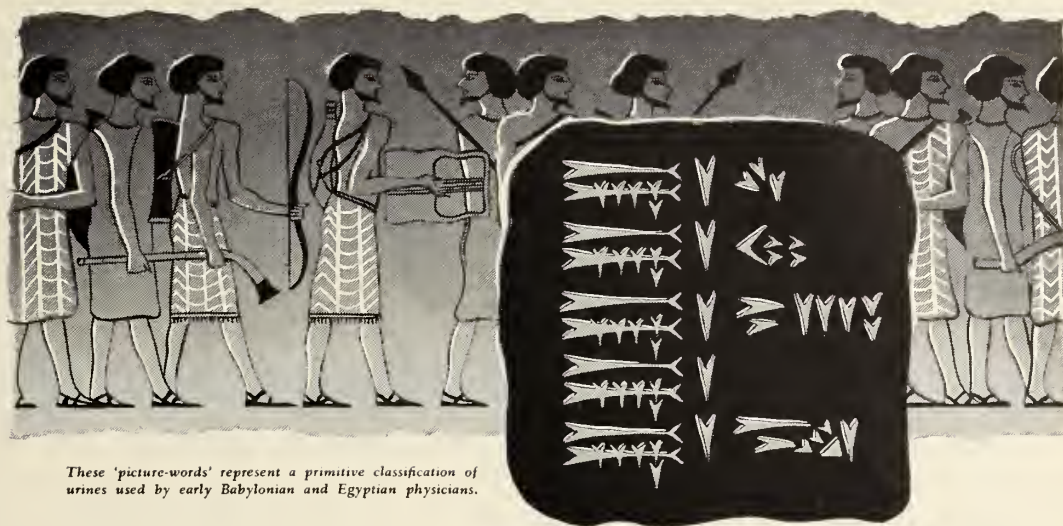
VERN T. BICKEL, M.D., Secretary.

**NINTH COUNCILOR DISTRICT****E. C. BOHRER, WEST PLAINS, COUNCILOR****South Central Counties Medical Society**

The South Central Counties Medical Society met for dinner at the El Patio Hotel, Cabool, on December 17, with the following members and visitors present: R. W. Denney, M.D., and A. C. Ames, M.D., Mountain Grove; Garrett Hogg, M.D., Cabool; T. J. Burns, M.D., Houston; Leslie Randall, M.D., and H. L. Reed, M.D., Licking; E. C. Bohrer, M.D., and C. T. Callihan, M.D., West Plains, and Mr. John Gass, Springfield.

After dinner the meeting was called to order in the office of Dr. Hogg by the president, Dr. Callihan, and the minutes of the last meeting were read and approved.





These 'picture-words' represent a primitive classification of urines used by early Babylonian and Egyptian physicians.

## centuries to perfect seconds to perform

When Sumerian and Babylonian physicians, *circa* 4000 B.C., noted the varying colors and constitutions of the "water of the phallus," they were probably not the first uroscopists in history. They were assuredly not the last, for fifty-odd centuries were to elapse before Fehling's first paper on the copper reduction test for urine-sugar appeared in 1848.

But centuries to perfect diagnostic procedures are condensed into seconds to perform the reliable *Clinitest*® method for urine-sugar levels. From start to finish, the test takes less than a minute. This tablet method is simplicity itself . . . readily learned by every diabetic patient. External heating is uniquely eliminated by the *Clinitest* procedure. Routine test interpretation is made easy.



# Clinitest

for urine-sugar analysis

AMES COMPANY, INC • ELKHART, INDIANA

Literature on the medical effects of the atomic bomb was distributed.

It was voted to accept the offer of the Missouri Heart Association to provide a speaker for the next meeting.

The following officers were elected: President, Garrett Hogg, M.D., Cabool; vice president, T. J. Burns, M.D., Houston; secretary and treasurer, A. C. Ames, M.D., Mountain Grove; censor for three years, Leslie Randall, M.D., Licking; delegates and alternates (Texas County), Garrett Hogg, M.D., and T. J. Burns, M.D.; (Wright County), R. A. Ryan, M.D., and R. W. Denney, M.D.; (Douglas County) M. C. Gentry, M.D., and Robert M. Norman, M.D.; (Howell County), C. F. Callihan, M.D., and R. H. Smith, M.D.; (Oregon County), C. W. Cooper, M.D., and F. A. Barnes, M.D.

A. C. AMES, M.D., Secretary.

## AMENDMENT TO THE CONSTITUTION

This is the second publication of the amendment submitted to the House of Delegates at the 1948 Annual Session by the Committee on Constitution and By-Laws at the request of Park J. White, M.D., St. Louis. The Constitution requires three publications of an amendment to the Constitution and requires it be held one year prior to action by the House of Delegates.

Amend Article IV of the Constitution by eliminating the word "white" so that when amended the article will read: "Article IV—Composition of the Association. This Association shall consist of members who shall be members of the component county medical societies to which only physicians shall be eligible who have been certified to the headquarters of this Association and whose dues and assessments for the current year have been received by the Secretary."

## ROSTER OF MEMBERS BY COUNTY SOCIETY

Holliday, Morgan Lee, Fillmore  
Kelley, Gilbert B., Savannah

Alford, Redman Lee, Vandalia  
Bland, Warren W., Vandalia  
Coll, Paul E., Mexico  
Dwyer, Thomas L., Mexico  
Gantt, Ernest, Mexico

Arnold, Herb M., Lamar  
Atkins, James A., Muskogee, Okla.  
Bickel, James T., Lamar  
Bickel, Vern T., Lamar

Allen, Claude J., Rich Hill  
Allen, William H., Jr., Hume  
Cooper, John M., Butler  
Ellett, William H., Appleton City

Glenn, David H., Warsaw

Ackerman, Lauren V., 225 Blackmeer Place, St. Louis  
Allee, James W., Columbia Professional Bldg., Columbia  
Allen, Horace E., 1 West Broadway, Columbia  
Allen, Joseph E., State Cancer Hospital, Columbia  
Baker, James M., 16 S. 10th St., Columbia  
Baskett, Edgar D., Columbia  
Battersby, Richard S., 113 Westwood, Columbia  
Blumenschein, J. C., 4 North 8th St., Columbia  
Bradford, Oscar F., 205 Exchange National Bank Bldg., Columbia  
Bricker, Eugene M., 600 S. Kingshighway, St. Louis  
Bruner, Claude R., Exchange Bank Bldg., Columbia  
Chiasson, E. Chaille, University of Missouri, Columbia  
Conley, Dudley Steele, 17 Bingham Rd., Columbia  
Cooper, Maurice Edmund, 8 Wayne Rd., Columbia  
Crouch, Richard L., Veterans Hospital, Hines, Ill.

Alford, Harry C., 2114 E. 69th, Kansas City  
Allaman, John M., 216 Physicians & Surgeons Bldg.  
Bansbach, Joseph J., 825½ Frederick Ave.  
Beck, Leroy, 201 King Hill Bldg.  
Bell, John M., 2805 Lafayette Ave.  
Berney, Francis J., 1225 N. 10th St.  
Bertram, Charles W., Empire Trust Bldg.  
Bloomer, Gaylord T., 1220 N. 3rd St.  
Boteler, George CcCrory, State Hospital No. 2  
Brooker, R. M., 825 Charles St.,

### ANDREW COUNTY MEDICAL SOCIETY

Kelley, Ralph R., Savannah  
Long, Forrest C., Savannah

### AUDRAIN COUNTY MEDICAL SOCIETY

Garcia, Charles L., Mexico  
Griffin, Fred, Mexico  
Harrison, John Frank, Mexico  
Jolley, J. Frank, Mexico

### BARTON-DADE COUNTY MEDICAL SOCIETY

Cain, Alvin R., Greenfield  
Cowan, Watt O., Greenfield  
Duckett, Claude E., Lamar

### BATES COUNTY MEDICAL SOCIETY

Hansen, Arthur L., Appleton City  
LaHue, L. D., Butler  
Lusk, Charles A., Butler  
Lusk, Charles A., Jr., Butler

### BENTON COUNTY MEDICAL SOCIETY

Logan, James A., Warsaw

### BOONE COUNTY MEDICAL SOCIETY

del Regato, J. A., State Cancer Hospital, Columbia  
Dexheimer, Frank E., 107 S. Glenwood Ave., Columbia  
Dietrich, Karl David, University Hospital, Columbia  
Dysart, William P., 16 S. 10th St., Columbia  
Garrett, Glen H., Professional Bldg., Columbia  
Gorelick, David F., O'Reilly Veterans Hospital, Springfield  
Griffith, Harry Milton, 817 W. Broadway, Columbia  
Highsmith, L. S., Columbia  
Holmes, I. Earl, Stephens College, Columbia  
Jordon, James E., 72 15 Lyndover, Maplewood  
Kampschmidt, August W., Columbia  
Lachance, Leopold, Centralia  
Ladenson, Roland Paul, 16 S. Tenth, Columbia  
Leech, Charles A., 417 Guitar Bldg., Columbia  
McComas, Arthur R., Sturgeon  
Martin, F. A., 1319 Anthony St., Columbia  
Modlin, John J., 116 College, Columbia  
Motley, Hurley L., Broad and Fitzwater St., Philadelphia, Pa.

### BUCHANAN COUNTY MEDICAL SOCIETY

(St. Joseph)

Brumm, Harold J., 825 Charles St.  
Buck, Ronald, 825 Charles St.  
Burgher, Arthur E., Kirkpatrick Bldg.  
Burkwall, Herman F., Address Unknown  
Butler, E. F., 825 Charles St.  
Bryne, John L., 3002 Frederick Blvd.  
Cameron, J. M., City Hall  
Carle, H. W., Jr., Physicians & Surgeons Bldg.  
Chiarotino, Joseph F., 1302 Faraon St.  
Conrad, Robert W., 404 Tootle Bldg.  
Craig, Owen W. D., 405 Tootle Bldg.

Wilson, Virgil R., Rosendale  
Wood, W. Logan, Bolckow

Joslyn, Howard Pratt, Mexico  
Kallenbach, G. P., Mexico  
McCall, William K., Laddonia  
O'Brien, Harry Francis, Mexico  
Williams, Robert Sidney, Mexico

Guldner, Edmond, Lamar  
Knapp, Rudolf, Golden City  
Locker, George E., Iantha  
Spell, Frank R., Liberal

Luter, Carter Wilkinson, Butler  
Monroe, C. D., Ulysses, Kansas  
Robinson, Edward E., Adrian  
Wooldridge, A. Graham, Butler

Reser, Thomas S., Cole Camp

Neal, M. Pinson, Missouri University, Columbia  
Nifong, Frank G., Route No. 1, Columbia  
Overholser, M. D., University of Missouri Medical School, Columbia  
Pryor, Harry Blackburn, Ashland  
Schmidtke, Edwin C., 909 University Ave., Columbia  
Schopp, Alvin C., Columbia  
Simpson, Lloyd, Miller Bldg., Columbia  
Simpson, Robert H., 506 Cherry St., Columbia  
Smith, Stephen D., 1404 E. Broadway, Columbia  
Stewart, William J., 909 University Ave., Columbia  
Stine, Dan G., Columbia  
Suggett, Finis C., Columbia  
Thomas, Horace E., 909 University Ave., Columbia  
Trimble, George X., University Hospitals, Columbia  
Varian, Thelma S., Stephens College, Columbia  
Waggoner, Charles M., Professional Bldg., Columbia  
Yeager, Helen E., 208 Westmount, Columbia  
Ziegler, Newell Richard, University of Minnesota, Minneapolis, Minn.

Day, Maxwell, 218 N. 7th St.  
DeLamater, Hasbrouck, 101 S. 19th St.  
Disque, Andrew A., Kirkpatrick Bldg.  
DuMont, Clement C., 822 N. 13th St.  
Dunsmore, J. M., 1st State Bank Bldg.  
Elam, William T., 1007 Ashland Court  
Eliscu, Fred, 212 S. 17th St.  
Elliott, John R., 801½ Francis St.  
Ferguson, Luther J., 723½ Felix  
Fisher, Joseph L., 824 Edmond St.  
Fordyce, Claude P., 118 North 8th St.  
Forgave, John R., 420 N. 8th St.



# Fifth Chicago Medical Society Annual Clinical Conference

Palmer House, Chicago Illinois

March 1, 2, 3, 4, 1949

A scientific program planned to bring information concerning newer developments in all fields of medicine and presented by these outstanding speakers:

Bernard J. Alpers  
W. A. Altemeier  
Walter C. Alvarez  
W. L. Benedict  
M. A. Blankenhorn  
Walter P. Blount  
Barney Brooks  
Paul C. Bucy  
J. J. Callahan  
Archibald D. Campbell  
John L. Emmett

Everett I. Evans  
Ray Farquharson  
Edmund F. Foley  
A. C. Furstenberg  
John W. Harris  
Charles B. Huggins  
Robert L. Jackson  
T. E. Jones  
Robert W. Keeton  
George M. Lewis  
Louis R. Limarzi

Ovid Meyer  
James L. Poppen  
Willis J. Potts  
Leo G. Rigler  
Arthur A. Schaefer  
Wendell G. Scott  
Roscoe L. Sensenich  
LeRoy H. Sloan  
Charles T. Stone  
William D. Stroud  
Harry M. Weber  
Henry W. Woltman

Interesting scientific exhibits and well displayed technical exhibits. Luncheon round tables where your questions will be answered.

Make your reservations at the PALMER HOUSE

March 1, 2, 3, 4, 1949

# MILWAUKEE SANITARIUM

WAUWATOSA, WISCONSIN

## FOR NERVOUS DISORDERS

(Chicago Office—1117 Marshall Field Annex  
Wednesday, 1-3 P. M.)

Maintaining the highest standards for more than a half century, the Milwaukee Sanitarium stands for all that is best in the care and treatment of nervous disorders. Photographs and particulars on request.

JOSEF A. KINDWALL, M.D.  
CARROLL W. OSGOOD, M.D.  
WILLIAM T. KRADWELL, M.D.  
BENJAMIN A. RUSKIN, M.D.  
LEWIS DANZIGER, M.D.  
RUSSELL C. MORRISON, M.D.  
G. CHARLES SUTCH, M.D.  
RAYMOND HEADLEE, M.D.  
ARTHUR J. PATEK, M.D., *Consultant*  
G. H. SCHROEDER, *Business Manager*

COLONIAL HALL—One of the 14 Units in "Cottage Plan."



Forgrave, Leon Paul, 420 N. 8th St.  
Forman, George William, P. O. Box 747  
Fulkerson, Perry P., Kirkpatrick Bldg.  
Fuson, Levi Harrison, Kirkpatrick Bldg.  
Goetze, William F., Box 187  
Grant, Claude S., 1302 Faraon St.  
Greenberg, Charles, Physicians & Surgeons Bldg.  
Grimes, M. E., Kirkpatrick Bldg.  
Handler, Eric, Physicians & Surgeons Bldg.  
Hansen, Walter Joseph, 2802 Jule St.  
Hartigan, Frank X., Kirkpatrick Bldg.  
Herman, Allen I., 1302 Faraon St.  
Howden, Thomas Laurence, 407 Kirkpatrick Bldg.  
Hughes, Judson Martin, Physicians & Surgeons Bldg.  
Hull, Walter S., Court House  
Hunt, William John, 309 Schneider Bldg.  
Ide, Lucien W., 825 Charles St.  
Johnson, Delbert P., State Hospital No. 2  
Kearby, Howard Denton, Kirkpatrick Bldg.  
Kieber, R. W., Physicians & Surgeons Bldg.  
Knepper, P. A., 825 Charles St.  
Kulowski, Jacob, 415 Corby Bldg.  
Lau, Gustav A., 217 Kirkpatrick Bldg.  
McDaniel, John R., 825 Charles St.

Biggs, Fred J., Jr., Poplar Bluff  
Brandon, Walter L., Poplar Bluff  
Brookreson, Alton F., Poplar Bluff  
Clay, Hampson S., Poplar Bluff  
Currie, Kenneth P., Britton, S. D.  
Dinelli, Frank E., Poplar Bluff  
Fonda, James W., Poplar Bluff  
Goforth, Clifford, Doniphan

Booth, Herbert R., Hamilton  
Carpenter, George W., Chillicothe  
Collier, Alfred, Chillicothe  
Conrad, Joseph, Chillicothe  
Daley, Frank R., Hamilton

Blasko, John J., V. A. Hospital, Gulfport, Miss.  
Bridges, A. D., Portland  
Brown, John J., Fulton  
Caldwell, James C., Fulton  
Cremer, William J., Fulton  
Crews, Robert N., Fulton

Claiborne, Edward G., Camdenton

Ashley, Hugh, Jr., Cape Girardeau  
Ashley, Hugh Vincent, Cape Girardeau  
Barnes, Asa, Address Unknown  
Barnes, Seth S., Cape Girardeau  
Berry, John W., Cape Girardeau  
Blaylock, Richard D., Oak Ridge  
Campbell, Edward D., Cape Girardeau  
Cockran, J. Howard, Cape Girardeau  
Crites, Edward, Sedgewickville  
Crowe, John T., Cape Girardeau  
Cunningham, Harvey L., Cape Girardeau  
Davault, Webster W., Allenville  
Drace, James J., Cape Girardeau  
Elrod, Dennis B., Cape Girardeau

Atwood, J. Morris, Carrollton  
Atwood, William G., Carrollton

Cotton, Tolman W., Van Buren  
Davis, Robert I., Birch Tree

Barger, O. B., Harrisonville  
Beckman, William, Strasburg  
Crawford, Harry S., 87 Lime St., Long Beach, Calif.  
Eklund, Alfred W., Pleasant Hill

Baker, Henry, Moberly  
Baker, Josephine D., Moberly  
Barnett, Floyd A., Paris  
Billeter, William J., Bynumville  
Buck, Ulysses Grant, Rothville  
Chute, W. Deward, Moberly  
Cohrs, Clarence C., Moberly

McDonald, Wilbur P., 301 N. 8th St.  
McGlothlan, Arthur B., 824 Edmond St.  
Mays, Joseph W., 2801 Renick Ave.  
Meluney, S. E., Kirkpatrick Bldg.  
Miller, Eugene A., 420 Kirkpatrick Bldg.  
Minton, Robert S., 705 Corby Bldg.  
Minton, William H., 705 Corby Bldg.  
Moen, Berwyn H., St. Joseph  
Moore, W. Roger, 206 Kirkpatrick Bldg.  
Morroway, James H., State Hospital No. 2  
Morse, Marvin, 2702 Faraon St.  
Muench, Albert Harry, 215 Physicians & Surgeons Bldg.  
Mullinax, Orr, State Office Bldg., Jefferson City  
Mundy, Homer F., 404 South Third St.  
Ness, Carl K., St. Joseph  
Neudorff, Louis G., 825 Charles St.  
O'Donoghue, James, 216 N. 7th St.  
Paul, Thomas M., 201 Physicians & Surgeons Bldg.  
Petersen, H. E., 212 Kirkpatrick Bldg.  
Potter, Thompson E., 731 Faraon St.  
Redmond, William, Kirkpatrick Bldg.  
Rosenthal, Irwin I., 2715 Union  
Rost, William B., Corby Bldg.  
Roundy, Collis I., Kirkpatrick Bldg.  
Ryan, John Harold, 301 N. 8th St.  
Saferstein, T. Harry, 2903 Sherman St.  
Senne, Herbert C., Physicians & Surgeons Bldg.

#### BUTLER COUNTY MEDICAL SOCIETY

Harwell, James Lee, Poplar Bluff  
Harwell, J. Lester, Poplar Bluff  
Henrickson, Hardin M., Poplar Bluff  
Henrickson, H. O., Poplar Bluff  
Hoxie, Derrick A., U. S. Naval Hospital, Portsmouth, Va.  
Kneibert, Fred Louis, Poplar Bluff

#### CALDWELL-LIVINGSTON COUNTY MEDICAL SOCIETY

Daley, Lyle M., Hamilton  
Dowell, Donald Maurice, Chillicothe  
Dowell, Horace S., Chillicothe  
Gale, Joseph F., Chillicothe  
Grace, Charles M., Chillicothe  
Grace, Clarence M., Chillicothe

#### CALLAWAY COUNTY MEDICAL SOCIETY

Durst, Henry, Fulton  
Fagley, Raymond C., 521 Hillside Terrace, West Orange, N. J.  
Gish, Rutledge, Fulton  
Glotfelty, Wayne, Fulton  
Hall, Robert G., State Hospital No. 3, Nevada  
McCall, Greene D., Fulton

#### CAMDEN COUNTY MEDICAL SOCIETY

#### CAPE GIRARDEAU COUNTY MEDICAL SOCIETY

Estes, Albert M., Jackson  
Ford, Walter W., Gordonville  
Fuerth, Arthur L., Cape Girardeau  
Gibson, Ora James, Cape Girardeau  
Hall, Frank W., Cape Girardeau  
Herbert, Charles T., Cape Girardeau  
Juden, Alexander G., Cape Girardeau  
Keim, John Harry, Cape Girardeau  
Kinder, James A., Cape Girardeau  
McDonald, Eugene F., Jackson  
Nussbaum, Paul B., Cape Girardeau  
Oehler, William F., Cape Girardeau  
Reynolds, Garland A., Cape Girardeau

#### CARROLL COUNTY MEDICAL SOCIETY

Bales, Eugene L., Carrollton  
Platz, John H., Carrollton

#### CARTER-SHANNON COUNTY MEDICAL SOCIETY

Eudy, William Thomas, Eminence

#### CASS COUNTY MEDICAL SOCIETY

Ellis, Frank B., Garden City  
Hartwell, Basil O., Drexel  
Jones, Edward S., Harrisonville  
Long, David S., Harrisonville  
Murray, Lotis V., Pleasant Hill

#### CHARITON-MACON-MONROE-RANDOLPH COUNTY MEDICAL SOCIETY

Dreyer, Philip V., Huntsville  
Eggleston, D. E., Macon  
Epperly, R. G., Huntsville  
Erni, Harry E., Macon  
Fellows, William W., Veterans Hospital, Aspinwall, Pa.  
Fleming, Jacob W., Jr., Moberly

Senor, Samuel D., 722½ Francis St.  
Senor, Samuel Earl, 722½ Francis St.  
Shores, Earl M., 317 Kirkpatrick Bldg.  
Simmons, Benjamin B., 801½ Francis St.  
Smith, Andrew J., Physicians & Surgeons Bldg.  
Smith, Clifton, 2502 Faraon St.  
Spencer, Floyd H., 404 Kirkpatrick Bldg.  
Stacy, Winton T., Station Hospital, Fort Sill, Okla.  
Stallard, Donald J., 825 Charles St.  
Stamey, James Thomas, 2624 St. Joseph Ave.  
Tadlock, Baxter W., King Hill Bldg.  
Tahir, Mohammad, 228 Illinois Ave.  
Talty, Matthew H., St. Joseph's Hospital, Houston, Texas  
Thomas, Forrest, State Hospital No. 2  
Thompson, Fred G., 825 Charles St.  
Thompson, F. G., Jr., 825 Charles St.  
Timerman, Arthur R., 234 Illinois Ave.  
Toothaker, Wayne M., 411 Kirkpatrick Bldg.  
Wadlow, Ernst E., Kirkpatrick Bldg.  
Werner, Charles H., 221 Kirkpatrick Bldg.  
Whitsell, John C., 1207 Francois St.  
Whitsell, Ora Earl, 824 Edmond St.  
Willumsen, Henry C., 825 Charles St.  
Wisser, John J., 109 N. 8th St.

McPheeters, James W., Poplar Bluff  
McPheeters, J. W., Jr., Poplar Bluff  
Markel, Arthur D., Poplar Bluff  
Post, Cyril A., Poplar Bluff  
Rowe, Alfred R., 1136 E. Harvard St., Glendale, Calif.  
Spaulding, William, Poplar Bluff  
White, Homer E., Naylor

Patterson, Henry H., Braymer  
Thompson, Emma A., Boyington, Breckenridge  
Vandiver, Virgil D., Chillicothe  
Wilbur, Clifford H., Polo

McCubbin, J. Burlie, Fulton  
Nichols, Charles B., Auxvasse  
Price, Robert P., Fulton  
Rusk, Earl M., New Bloomfield  
Tate, Prentiss S., Fulton  
Williamson, William Henry, Mokane  
Wood, George F., Fulton

Myers, George T., Macks Creek

Ritter, Raymond A., Cape Girardeau  
Ruff, Troy E., Jackson  
Schulz, Gustav B., Cape Girardeau  
Seabaugh, Dayton I. L., Jackson  
Seabaugh, D. Rusby, Cape Girardeau  
Seabaugh, Oda L., Cape Girardeau  
Shelby, Mitchell Hudson, Cape Girardeau  
Sparhawk, William J., Cape Girardeau  
Trolinger, J. H., Jackson  
Tygett, Glenn J., Cape Girardeau  
Wescoat, William H., Cape Girardeau  
Wilson, Charles F., Cape Girardeau  
Zimmermann, C. A. W., Cape Girardeau

Reed, Carl H., Carrollton  
Staton, R. Hamilton, Carrollton

Hyde, Frank, Eminence  
Rollins, H. D., Winona

Neis, Harry B., Harrisonville  
Robbins, Martin V., Peculiar  
Scott, James U., Harrisonville  
Tracy, Herbert A., Belton  
Triplett, Jacob S., Harrisonville

Fleming, Thomas S., Moberly  
Griffiths, Harry Chapman, Moberly  
Gronoway, Terrence P., Macon  
Hardy, John W., Sumner  
Harms, Florian L., Salisbury  
Hawkins, George, Salisbury  
Hawkinson, W. O., Roanoke



Huber, Lasley Earl, Moberly  
Hyatt, William T., 3805 S. Broadway, St. Louis  
Lewis, Andrew L., Sumner  
Lucas, William B., Mendon  
McAdam, James D., Prairie Hill  
McCormick, Frank L., Moberly  
McMurray, Marvin C., Paris  
Megee, William K., Moberly

Altomare, Edward P., Excelsior Springs  
Bailey, William H., Excelsior Springs  
Baird, J. Edward, Excelsior Springs  
Dawson, Lerton V., Excelsior Springs  
Dunham, R. H., North Kansas City  
Dwyer, Reinhardt D., North Kansas City  
Fowler, I. Charles, North Kansas City  
Goodson, William H., Liberty  
Grace, John F., Excelsior Springs  
Hardegree, Harvey, Nichols Vet. Hospital, Louisville, Ky.  
Hendren, Glenn W., Liberty  
Hobbs, Earl B., Smithville  
Houck, Russell M., Excelsior Springs

Batty, James, Plattsburg  
Dunkeson, Edward B., Lathrop  
Kimes, Ira D., Cameron

Adams, C. Frederick, 800 E. High St.  
Aldridge, Mahlon Roy, Trust Bldg.  
Belden, Edgar A., State Office Bldg.  
Bohrer, Edward R., 127½ E. High St.  
Bruce, James G., 234 Madison St.  
Dorris, Richard P., Trust Bldg.  
Enloe, Lawrence David, Trust Bldg.  
Gillham, Frank W., Trust Bldg.  
Kanagowa, H., Dallmeyer Bldg.  
Kelly, Marshall W., 229a East High St.  
Klebba, Larry B., 712 W. High St.  
Krause, Irl B., 601 Trust Bldg.  
Leslie, J. Paul, Jefferson City  
Leslie, J. T., 933 Fairmount

Beckett, Theodore C., Boonville  
Boley, James O., 3538 Montgall, Kansas City  
Chamberlain, Gilbert L., New Franklin  
Diekroeger, Manuel Louis, Boonville

Barnett, C. H., Bolivar  
Brooks, John Medford, Diamond  
Glasco, Loren Agnew, Urbana  
Griffin, Evelyn, Buffalo

Gale, William S., Osborn

Bailey, S. M., Malden  
Baldwin, Paul, Kennett  
Beall, Homer, Malden  
Belsey, Wallace A., Campbell  
Bond, Van H., Hornersville  
Cofer, James Clinton, Kennett  
Dempsey, D. T., Kennett  
Dunmore, George O., Kennett  
English, Wallace Davis, Cardwell

Bozzo, Raymond John, Washington  
Brenner, Paul A., Owensville  
Briegleb, Charles F., St. Clair  
de la Torre, John J., Sullivan  
Denny, Hubert M., Union  
Duckworth, William Henry, St. Clair  
Ecker, Decider B., Pacific  
Eisenmann, Benjamin P., New Haven  
Eyermaun, H. Walter, Warrenton  
Goodrich, Charles F., Washington

Abbott, Clyde B., 219½ E. Walnut  
Amos, James R., 820 E. Elm St.  
Atherton, Mary Jean, 318 St. Louis St.  
Barber, John J., Walnut Grove  
Beatie, William R., 530 Medical Arts Bldg.  
Bechtold, Frederick F., 1630 N. Jefferson Ave.  
Boots, Roger H., Medical Arts Bldg.  
Box, Earnest M., Landers Bldg.

Miller, D. Herbert, Veterans Hospital, Muskogee, Okla.  
Miller, Howard S., Macon  
Newton, Henry O., LaPlata  
Nickell, Luther O., Moberly  
Ragsdale, George Moss, Paris  
Rice, Grover C., Brunswick  
Rowlette, A. P., Moberly

#### CLAY COUNTY MEDICAL SOCIETY

Howell, James Albert, O'Reilly Vet. Hosp., Springfield  
Kaplan, Rubin H., U. S. Vet. Hosp., Swannanoa, N. C.  
Knox, Earl R., North Kansas City  
Langhus, Melvin O., North Kansas City  
Lowry, Ray Ford, Smithville  
McCormick, James Edward, North Kansas City  
McCracken, Samuel R., Excelsior Springs  
Mullins, Bernard L., North Kansas City  
Musgrave, David E., Excelsior Springs  
Parker, Robert H., North Kansas City

#### CLINTON COUNTY MEDICAL SOCIETY

Longfield, Fred J., Lathrop  
Reynolds, Stephen D., Plattsburg  
Santnec, F. J., Lathrop

#### COLE COUNTY MEDICAL SOCIETY

(Jefferson City)

Leslie, James T., Jr., 207 Central Trust Bldg.  
Leslie, Walter L., Russellville  
Loyd, Earl L., 425 Madison St.  
Loyd, H. O., 425 Madison St.  
McHaney, John W., Trust Bldg.  
McKnelly, William von, 1111 Moreau Drive  
Mansur, Edward E., Central Hotel Bldg.  
Maxey, Hugh W., 626 Jefferson St.  
Meinershagen, Charles W., Ellis Fischel State Cancer Hospital, Columbia  
Ossman, Julian A., 2030 W. Main St.  
Russell, Richard Lee, Ashland

#### COOPER COUNTY MEDICAL SOCIETY

Evans, Robert L., Boonville  
Huelsmann, Donald, Boonville  
Humphreys, Edward T., Pilot Grove  
Morgan, Donald Nye, Boonville  
Stone, William E., Boonville  
Stuart, Byron M., Boonville

#### DALLAS-HICKORY-POLK COUNTY MEDICAL SOCIETY

Griffin, Olin A., Jr., Buffalo  
Harrell, Henry J., Morrisville  
McCraw, Doyle C., Bolivar  
O'Brien, J. R., Bolivar

#### DEKALB COUNTY MEDICAL SOCIETY

#### DUNKLIN COUNTY MEDICAL SOCIETY

Glasgow, Marvin C., Cardwell  
Green, Robert S., Kennett  
Linton, C. S., Kennett  
Martin, Robert E., Senath  
Mitchell, Samuel E., Malden  
Peck, Chester R., Jr., Kennett  
Pressnell, George R., Kennett  
Rigdon, Thomas J., Kennett  
Rutledge, William J., Campbell  
Speidel, Frederick W., Senath

#### FRANKLIN COUNTY MEDICAL SOCIETY

Hoelscher, Harold F., Warrenton  
Johnson, Grover C., Marthasville  
Keller, Robert M., Owensville  
Kitchell, William Everett, St. Clair  
Macauley, Bernard Joseph, Gerald  
McNay, Albert L., Pacific  
Matthews, Gilpin L., Beaufort  
Mays, Frank G., Washington  
Muench, Ludwig O., Washington  
Pletcher, K. E., 27th A. A. F. Base Unit, Randolph Field, Texas

#### GREENE COUNTY MEDICAL SOCIETY

(Springfield)

Bruton, Tyrrel S., Woodruff Bldg.  
Burke, Walter H., Woodruff Bldg.  
Busiek, Urban J., 804 Medical Arts Bldg.  
Callaway, Guy Drennan, 801 S. Kickapoo  
Cheek, William C., Medical Arts Bldg.  
Coffelt, Kenneth C., 1630 North Jefferson Ave.  
Cole, Paul F., 600 Medical Arts Bldg.  
Conrad, Raymond C., 609 Cherry St.

Shrader, Eugene W., Moberly  
Smith, Carl Clifford, Moberly  
Stokes, James Bell, Excello  
Streeter, Roderick D., Hotel Geneve, Mexico City, Mexico  
Stuart, Daniel D., Brunswick  
West, William D., Address Unknown  
Winn, James W., Higbee  
Young, Robert H., Moberly

Pate, O. S., North Kansas City  
Porter Russell C., North Kansas City  
Prather, Roy Williams, Excelsior Springs  
Robichaux, Eugene Bissell, Excelsior Springs  
Robichaux, Eugene C., Excelsior Springs  
Sanders, George Earl, Excelsior Springs  
Schroeder, Sidney O., Liberty  
Schuhmacher, N. R., San Marino, Calif.  
Spelman, Archibald E., Smithville  
Sprong, Aaron A., Excelsior Springs  
Waterman, F. M., Liberty  
Webb, J. Warner, Jr., North Kansas City  
Willoughby, James W., Liberty

Spalding, Wilber Braden, Plattsburg  
Starks, John C., Gower  
Wilbur, Ronald E., Cameron

Sennott, John S., 129 E. High St.  
Shirley, George H., Eugene  
Shull, George Donald, 229-A East High St.  
Stauffer, Harry B., Central Trust Bldg.  
Stephan, August P., 98 W. Circle Drive  
Sugarbaker, Everett D., 1833 Hazelton  
Summers, Joseph S., Trust Bldg.  
Summers, Joseph S., Jr., 1355 Victoria N. St., Minn.  
Taylor, Herbert I., Central Trust Bldg.  
Taylor, Leon A., 129 E. High St.  
Wiley, Horace M., 503 E. High St.  
Wittels, Theodore Saul, 125 E. High St.

Tincher, Joseph C., Boonville  
Van Ravenswaay, Arie C. H., 2430 E. Sixth St., Tucson, Ariz.  
Winn, George W., Boonville  
Ziegler, William Henry, Boonville

Plummer, Grover C., Buffalo  
Robinson, George G., Humansville  
Tillman, W. W., Jr., Bolivar  
Wrinkle, Thomas D., Halfway

Johnson, Glenn D., Maysville

Speidel, Roy E., Senath  
Spence, Elbert L., Kennett  
Spence, George David, Kennett  
Stanfield, Wayne, Hornersville  
Tarver, Quinton, Kennett  
Van Cleve, John D., 413 Westgate Drive, Corpus Christi, Texas  
Williams, Charles S., Malden  
Wilson, Loys C., Kennett

Proctor, Carter A., Sullivan  
Richardson, William R., Union  
Royse, Roy P., Sullivan  
Ryan, John B., Hermann  
Schmidt, Charles A., Washington  
Schmidt, Herbert H., Washington  
Shaw, Carvel Thomas, Hermann  
Steinbeck, Herbert Duckworth, Pacific  
Strehlman, Benjamin G., Union  
Wepprich, Michael S., Washington

Coon, James W., 4226 Kingman, Des Moines, Iowa  
Craig, Arthur D., 512 Landers Bldg.  
Delzell, William A., 410 McDaniel Bldg.  
Dills, Joseph Newton, 609 Cherry St.  
Duncan, Robert D., 640 Medical Arts Bldg.  
Elkins, Ronald F., Medical Arts Bldg.  
Ellis, Francis J., 732 Medical Arts Bldg.  
Epps, Curtis, 450½ E. Commercial  
Evans, Ezra L., Jr., 835 E. Elm St.

Evans, Ezra L., 609 Cherry St.  
Farthing, Fred R., 1234 E. Walnut  
Farthing, Gene W., Holland Bldg.  
Feller, C. F., 609 Cherry St.  
Ferguson, John P., Jr., 1304 Meadowmere Ave.  
Ferrell, Thomas Enoch, Jr., 1525 Meadowmere Ave.  
Fitch, C. H. Max, 200½ W. Commercial  
Focht, Ralph H., Strafford  
Freeman, Hal Elson, Willard  
Freeman, Samuel F., 200 E. Commercial St.  
Fulbright, James H., 1033 E. Walnut  
Gentry, Merritt L., 432 Medical Arts Bldg.  
Gifford, Allen William, 1050 E. Walnut St.  
Glenn, Elmer E., 842 Medical Arts Bldg.  
Glynn, Robert, 500 Holland Bldg.  
Griot, George A., Medical Arts Bldg.  
Hall, Durward G., 500 Holland Bldg.  
Hanan, Ernest B., 729 S. Kickapoo  
Handley, Walter E., 917 E. Monroe  
Hans, Armand W., Medical Arts Bldg.  
Harris, Thomas S., 332 Medical Arts Bldg.  
H'Doubler, Francis T., Medical Arts Bldg.  
Heimburger, Leroy F., Medical Arts Bldg.  
Hogeboom, George W., 208 Professional Bldg.  
Hoover, H. Lee, Jr., Holland Bldg.  
Horst, Otto C., Medical Arts Bldg.  
Horton, James D., 500 Medical Arts Bldg.  
James, Joseph D., 500 Medical Arts Bldg.  
Johnston, Joseph LeRoy, 1919 South Jefferson  
Klingner, George M., Route 3, Box 851

Breid, Jacob, Spickard  
Cullers, Charles Horace, Trenton  
Duffy, Edgar A., Trenton  
Duffy, Oliver F., Trenton

Brewer, Lake, Ridgeway

Baggerly, Walter E., Montrose  
Blackmore, Thomas A., Windsor  
Douglas, Thomas H., Jr., Osceola  
Galbreath, Jesse W., Urich  
Harwood, Samuel R., 5554 Waterman Ave., St. Louis

Chandler, John F., Oregon  
Hogan, Frank E., Mound City

Bloom, W. A., Fayette  
Dean, Francis D., Fayette

Aaron, George A., 928 Argyle Bldg.  
Adams, Noah, 818 Professional Bldg.  
Adelman, Arthur, City Hospital, Cleveland, Ohio  
Ahlefeldt, Charles B., 215 Pershing Road  
Aisenstadt, E. Albert, 1022 Argyle Bldg.  
Allebach, H. K., Research Hospital  
Allen, Charles E., 712 Waldheim Bldg.  
Allen, Charles H., First National Bank Bldg., Independence  
Allen, Sylvia, 1010 Professional Bldg.  
Allen, William B., 424 Professional Bldg.  
Altringer, Arthur N., 1622 Professional Bldg.  
Anderson, A. Isadore, 723 W. 45th St.  
Anderson, Raymond B., Plaza Time Bldg.  
Anderson, Richard W., 21 West 58th St.  
Anderson, W. Connelly, 6416 Independence Ave.  
Andrews, Bernell W., Gen. Hosp. No. 1  
Andrus, Bailey C., 233 Plaza Medical Bldg.  
Arms, Arnold V., 315 Alameda Road  
Aschman, Theodore H., 1518 Professional Bldg.  
Asher, Arthur Graham, 1220 Professional Bldg.  
Atcheson, Bellfield, 5301 Shawnee Mission Road  
Atwell, Floyd Carroll, 315 Alameda Road  
Aull, John, 1306 Professional Bldg.  
Baer, Alvin J., 1404 Bryant Bldg.  
Ball, James E., 1102 E. 47th St.  
Barnett, Gordon P., 6305 Brookside Plaza  
Barry, Gerald W., 840 Argyle Bldg.  
Bay, Merrill L., Blue Springs  
Beal, Homer A., 1000 Professional Bldg.  
Beattie, Thomas J., 3552 Broadway  
Becker, Richard R., 4000 Baltimore

Knabb, Arthur D., 440½ E. Commercial  
Knabb, Harris, 450½ East Commercial  
Knabb, Henry F., 440½ E. Commercial  
Knabb, Henry F., Jr., 1630 N. Jefferson  
Knabb, Kenneth E., 450½ E. Commercial  
Langston, Walter R., Medical Arts Bldg.  
LeCompte, Elmo M., Brookline Station  
Lemmon, George B., 600 Medical Arts Bldg.  
Lemmon, G. Bruce, Jr., Medical Arts Bldg.  
Leslie, James F., 200 E. Commercial  
Lowe, Horace A., 700 Medical Arts Bldg.  
Maddux, William Paul, 209 Professional Bldg.  
Maples, Floyd H., Marshall  
Marcus, Edward, Woodruff Bldg.  
Marshall, W. J., 618 Landers Bldg.  
Melchert, Harold B., Wilhort Bldg.  
Mendez, Fernando L., Jr., Republic  
Meyer, Claude B., 410 McDaniel Bldg.  
Morton, Paul C., 1508 E. Stanford  
Musick, James D., Medical Arts Bldg.  
Napper, Marvin L., Medical Arts Bldg.  
O'Brien, James A., Rogers, Ark.  
Ormsbee, James L., 2013 N. National  
Park, William I., Jr., 209 Professional Bldg.  
Peterson, Stanley S., 500 Holland Bldg.  
Pickens, E. Allen, 432 Medical Arts Bldg.  
Plumlee, William C., 511 Holland Bldg.  
Pope, Nathan K., 221½ E. Commercial St.  
Rainwater, E. H., 922 Meadowmere  
Rigney, Levi M., S.S. Sta. Box 1428

#### GRUNDY-DAVIESS COUNTY MEDICAL SOCIETY

Fuson, William Arthur, Trenton  
Kimberlin, Herbert C., Trenton  
Lowry, Henry L., Tindall  
Mairs, Edgar J., Trenton  
Nixon, Edward E., Gallatin

#### HARRISON COUNTY MEDICAL SOCIETY

Broyles, Watkins A., Bethany

#### HENRY COUNTY MEDICAL SOCIETY

Hollingsworth, Ray S., Clinton  
Hughes, Shelby Bond, Clinton  
Jennings, Robert J., Windsor  
Peelor, Edwin C., Clinton  
Russell, John J., Deepwater  
Smith, James O., Clinton

#### HOLT COUNTY MEDICAL SOCIETY

Kearney, Elmer F., Oregon

#### HOWARD COUNTY MEDICAL SOCIETY

Gardner, Joseph W., Glasgow

#### JACKSON COUNTY MEDICAL SOCIETY

(Kansas City)

Bee, James E., 3520 Broadway  
Beil, J. Wallace, 1302 Bryant Bldg.  
Belaval, Gustavo S., 1401 Southwest Blvd., Kansas City, Kansas  
Bell, J. Vardiman, 209 Plaza Time Bldg.  
Bellows, George E., Address Unknown  
Belot, Monti L., American Red Cross, Charlotte, N. C.  
Bennett, James Dale, 822 Argyle Bldg.  
Bennett, Joseph S., 1533 Ash Ave., Independence  
Bergman, Victor Henry, 1120 Professional Bldg.  
Bernreiter, Michael, 436 Professional Bldg.  
Berrey, Bedford, 6247 Brookside Blvd.  
Berry, Maxwell G., 315 Alameda Road  
Bills, Marvin L., 236 Plaza Time Bldg.  
Birenboim, Irvin M., 600 S. Kingshighway, St. Louis  
Black, Donald R., 924 Professional Bldg.  
Black, Eugene C., 1228 Professional Bldg.  
Black, W. Byron, 535 Professional Bldg.  
Bohan, Peter T., Plaza Medical Bldg.  
Boody, Robert James, Plaza Time Bldg.  
Border, Charles T., 500 Gladstone Blvd.  
Borenstine, Joseph, 121 W. 63rd St.  
Boughnou, Harvey P., 315 Alameda Road  
Bourke, Timothy S., 414 Argyle Bldg.  
Boutros, Amin, 416 Argyle Bldg.  
Bower, Richard L., Box 2833, Carmel, Calif.  
Bowser, John F., Plaza Time Bldg.  
Brainard, Benjamin F., Martin City  
Brams, Jack Bernard, 408 Argyle Bldg.  
Brown, Adrian J., 215 Argyle Bldg.  
Brown, Irwin Schilling, 230 Plaza Time Bldg.  
Brown, Robert S., 4241 W. 51 Terrace, Mission, Kan.

Sartin, John M., Medical Arts Bldg.  
Schwartz, Eugene J., 716 S. Weller Ave.  
Schweitzer, Fred C., Jr., Woodruff, Bldg.  
Sewell, Walter S., Medical Arts Bldg.  
Sicheluff, Joseph G., 609 Cherry St.  
Silsby, Don H., 326 Landers Bldg.  
Silsby, Don James, 303 McDaniel Bldg.  
Silsby, Harry D., 208 Professional Bldg.  
Simpson, Emerson L., 222½ E. Commercial St.  
Smith, C. Souter, 513 Holland Bldg.  
Smith, Wallis, 500 Holland Bldg.  
Stahl, Fred A., 307 Woodruff Bldg.  
Stewart, R. Wendell, 203 Professional Bldg.  
Stone, Murray, 542 Medical Arts Bldg.  
Tarrasch, E. L., Woodruff Bldg.  
Taylor, William E., Southwest Missouri State College  
Turner, Glenn O., Medical Arts Bldg.  
Upshaw, Paul O., Medical Arts Bldg.  
Vail, A. Denton, 432 Medical Arts Bldg.  
Vinyard, Robert, 700 Medical Arts Bldg.  
Wakeman, Jasper Newton, 626 Woodruff Bldg.  
Walsh, William Timothy, Kingwood, W. Va.  
Webb, Leslie R., 1254 E. Meadowmere  
White, R. Ned, 205 Professional Bldg.  
Williams, John W., 201 Professional Bldg.  
Williams, John Wood, Jr., Jefferson City  
Williams, Robert F., 710 Landers Bldg.  
Wills, William J., 525 E. Calhoun  
Yancey, Daniel L., 500 Holland Bldg.

Parker, John Z., Pattonsburg  
Quisito, Joseph M., Trenton  
Weston, Ursa C., Galt  
Wilson, Fred K., Winston

Gearhart, M., Bethany

Walker, George S., Clinton  
Walker, Hugh B., Clinton  
Wall, Harvey, M., Windsor  
Walton, Josiah H., 536 N. Taylor Ave., St. Louis  
Woltzen, Samuel W., Urich

Perry, David C., Mound City  
Tracy, James C., Mound City

Leech, Maurice P., Fayette  
Shaw, William J., Fayette

Broyles, Glen H., 1232 Professional Bldg.  
Brumm, Lawrence W., 508 Wirthman Bldg.  
Bruner, Robert E., 5818 Cherry St.  
Brust, Carl H., P. O. Box 679  
Buckingham, William, 314 Professional Bldg.  
Budke, Harold A., Argyle Bldg.  
Buhler, Victor B., General Hospital No. 1  
Bunting, Williston P., 1622 Professional Bldg.  
Burns, Jonathan Edw., 530 S. George, Charles Town, W. Va.  
Byers, Philip L., 315 Alameda Road  
Cain, Arthur S., Jr., 507 Professional Bldg.  
Caldwell, John Klumpp, 1036 Argyle Bldg.  
Callaway, Luther M., 1000 Argyle Bldg.  
Campbell, Frederick B., 1210 Professional Bldg.  
Cantrell, Cyrus D., 636 Argyle Bldg.  
Capell, Clarence Swift, 1135 Rialto Bldg.  
Carbaugh, Glenn C., 2004 Bryant Bldg.  
Carlson, Hjalmar Edwin, 1316 Professional Bldg.  
Carmichael, Francis A., 320 W. 47th St.  
Carmichael, Francis A., Jr., 320 W. 47th St.  
Carrier, Edson C., 315 Alameda Road  
Casebolt, Milton B., 4000 Baltimore  
Casford, Ralph S., 315 Alameda Road  
Castelaw, Rush English, 3731 Locust St.  
Castles, John E., 1002 Argyle Bldg.  
Cavaness, E. W., 1905 Buffalo Dr., Houston, Tex.  
Chambers, James Q., Jr., 1232 Professional Bldg.  
Clark, Charles F., Address Unknown  
Clark, Harold B., Rialto Bldg.  
Clasen, Arthur C., 651 W. 70th St.



# guide posts...

## TO BETTER NUTRITION

In dietary planning, the physician may prescribe with complete confidence any of Borden's nutritional preparations. They conform at all times to the most modern concepts of nutritional science, and are formulated and produced with meticulous concern for quality, purity, and clinical serviceability.

**BIOLAC**, approximating human milk in its nutritional content and digestibility, is an ideal replacement for mothers' milk. With the addition only of ascorbic acid, it becomes a complete food — "baby talk for a good square meal".

**MULL-SOY** is a hypoallergenic soy concentrate — for those allergic to milk — closely resembling cow's milk in all its nutritional values, but without the offending animal proteins. When milk becomes "forbidden food", Mull-Soy offers a nutritionally efficient replacement.

**DRYCO** provides a "master key" to infant nutrition with its wide range of formula flexibility for individual needs. Its high protein, low fat, intermediate carbohydrate ratio — for use with or without added carbohydrate — makes it the "custom-formula" food for all infant requirements.

**BETA LACTOSE** is a highly palatable and readily soluble formula modifier in the form of an improved milk sugar, five times more soluble than alpha lactose. Milk's natural carbohydrate for infants and adults alike.

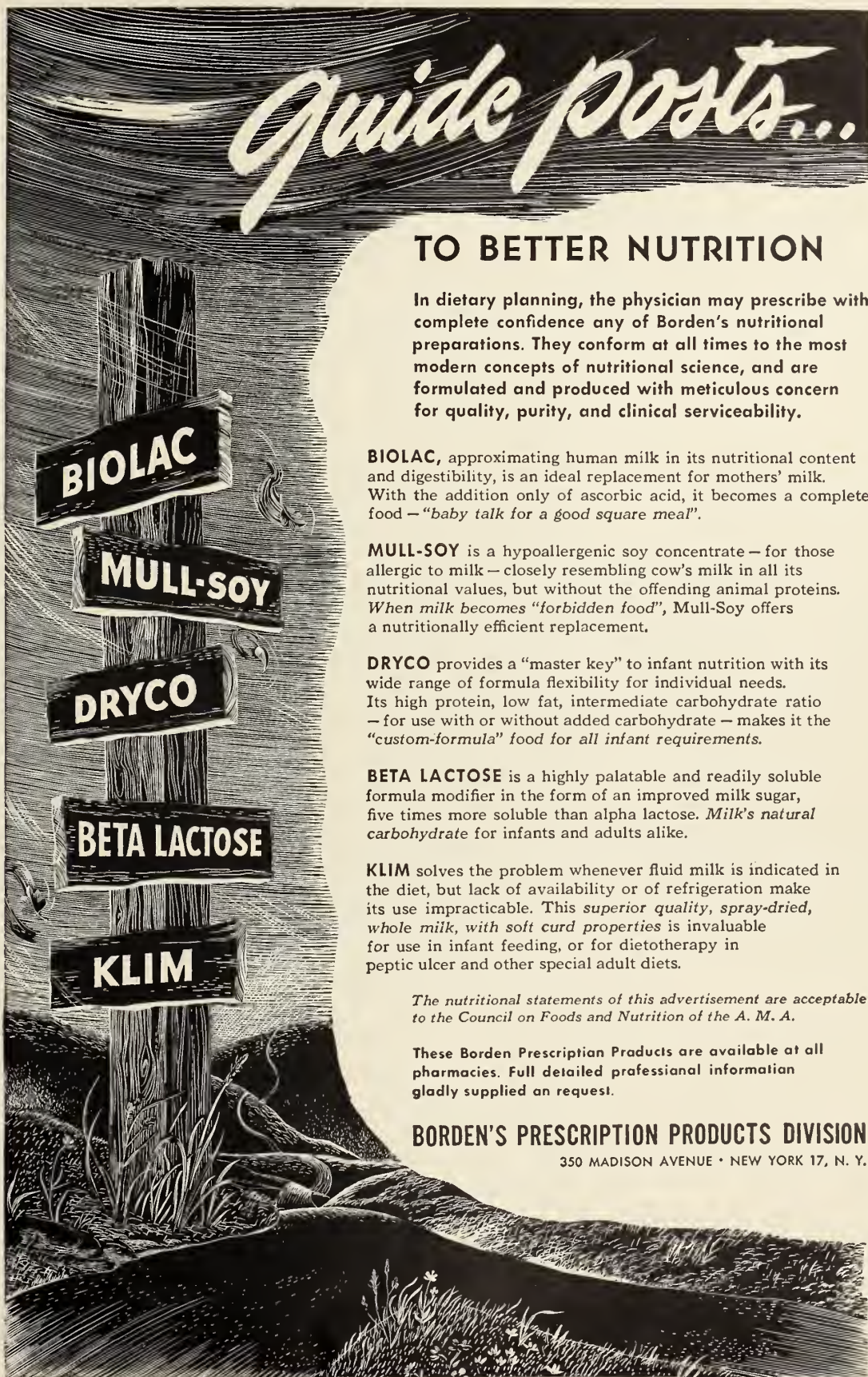
**KLIM** solves the problem whenever fluid milk is indicated in the diet, but lack of availability or of refrigeration make its use impracticable. This superior quality, spray-dried, whole milk, with soft curd properties is invaluable for use in infant feeding, or for dietotherapy in peptic ulcer and other special adult diets.

*The nutritional statements of this advertisement are acceptable to the Council on Foods and Nutrition of the A. M. A.*

These Borden Prescription Products are available at all pharmacies. Full detailed professional information gladly supplied on request.

### BORDEN'S PRESCRIPTION PRODUCTS DIVISION

350 MADISON AVENUE • NEW YORK 17, N. Y.





- Coburn, Donald F., 221 Plaza Time Bldg.  
Cochrane, Joseph J., 200 Plaza Medical Bldg.  
Coffey, Ralph Ringo, 1324 Professional Bldg.  
Coffin, Helen Kingsbury, 248 Plaza Medical Bldg.  
Coffin, Theodore A., 911 Waldheim Bldg.  
Cohen, Harry K., 318 Argyle Bldg.  
Colby, Buford M., Hale  
Comboy, Lawrence J., 604 W. Maple, Independence  
Connell, Evan S., 1408 Commerce Bldg.  
Conover, Charles C., Trinity Lutheran Hospital  
Cooper, John H., 1230 Argyle Bldg.  
Cope, James C., K. C. General Hospital  
Cope, Josef S., 1612 Professional Bldg.  
Cordry, Harold V., 805 Elmwood Ave.  
Cortner, Mary C., 3119 Troost  
Counsell, Chester M., 708 W. 17th St.  
Cowherd, Joseph Bird, 63rd & Brookside  
Cox, Kenneth E., 1500 Professional Bldg.  
Culbertson, William F., O'Reilly Veterans Administration Hosp., Springfield, Mo.  
Cummins, Walter F., 1612 Professional Bldg.  
Curran, Edward J., 1805 Fed. Res. Bank Bldg.  
Curran, Kevin E., 1805 Fed. Res. Bank Bldg.  
Curran, Maurice Desmond, 925 Grand Ave.  
Daglade, James H., Plaza Time Bldg.  
Dann, David Samuel, 410 Professional Bldg.  
Darnell, Thomas F. B., 804 N. Van Buren, Little Rock, Ark.  
Davis, Albert W., 5331 Paseo  
Davis, Herbert V., 411 Alameda Rd.  
Davis, Jack M., Raytown  
Davis, John J., 1010 Professional Bldg.  
Davis, Kenneth Albert, 231 W. 47th St.  
Davis, Robert C., 820 Professional Bldg.  
DeMaria, Peter Frank, St. Joseph Hospital  
DeMotte, John Allan, 315 Alameda Rd.  
Dennie, Charles C., 1524 Professional Bldg.  
DeVilbiss, E. F., 4470 Rockhill Terrace  
Deweese, Everett Rollins, 1020 Rialto Bldg.  
Dickson, Frank D., 1400 Professional Bldg.  
Diamond, Edgar A., General Hospital No. 1  
Diveley, Rexford L., 1400 Professional Bldg.  
Dixon, Otto Jason, 1617 Professional Bldg.  
Diabab, Luke J., 1210 Ash Ave., Independence  
Donaldson, J. Earle, 400 Argyle Bldg.  
Downey, James W., Argyle Bldg.  
Draney, Thomas L., 308 Argyle Bldg.  
Duer, Mildred C., 300 W. 47th St.  
Dugay, Harry William, 1401 Prospect Ave.  
Duncan, Ralph E., 909 Argyle Bldg.  
Duncan, William H., 1200 Professional Bldg.  
Dwyer, Hugh L., 315 Alameda Road  
Edde, Clifford G., 500 Argyle Bldg.  
Edmonds, Devilla D., 4800 E. 24th St.  
Edmondson, J. Phil, 1025 Argyle Bldg.  
Eldridge, Charles J., 6247 Brookside Blvd.  
Elliott, Benjamin Landis, 1418 Professional Bldg.  
Elliott, James R., 1216 Professional Bldg.  
Elliott, Raymond Glenn, 1402 Bryant Bldg.  
Elston, George B., 400 Argyle Bldg.  
Engel, Lawrence P., 315 Alameda Road  
Esmond, Marie, 1300 Professional Bldg.  
Etzenhouser, Merrill W., 503 First National Bank Bldg., Independence  
Etzenhouser, Russell D., Jr., 400 First National Bank Bldg., Independence  
Eubank, Ambrose E., 1404 Bryant Bldg.  
Eubank, Dillard M., Raytown  
Eubank, William R., 1404 Bryant Bldg.  
Evans, E. John E., 336 W. 36th St.  
Fair, Shields W., 7308 Washington  
Farley, Claude C., 4301 Main St.  
Farney, Jacob P., 6305 Brookside Place  
Farnsworth, Jesse J., 730 Professional Bldg.  
Feierabend, Frank L., 327 Argyle Bldg.  
Feist, George V., 217 W. 67 Terrace  
Ferguson, Eugene H., 933 Professional Bldg.  
Ferguson, James T., 410 Bryant Bldg.  
Ferguson, James T., Jr., Palo Alto, Calif.  
Ferris, Carl R., 934 Argyle Bldg.  
Findley, James W., 411 Shukert Bldg.  
Fitzwilliam, C. Dennis, General Hospital No. 1  
Flanders, Horace Frank, 522 Professional Bldg.  
Florian, Albert J., 1209 Waldheim Bldg.  
Forman, Frank S., Jr., 1110 Professional Bldg.  
Frankl, George, 1020 McGee  
Fredeen, Robert C., Plaza Time Bldg.  
Frick, John Paul, 800 Professional Bldg.  
Friedman, Morris L., 314 Argyle Bldg.  
Fuhrman, Donald Lee, Research Hospital, Chicago  
Gainey, Harold L., 315 Alameda Road  
Ganley, William C., 1022 Argyle Bldg.  
Gard, Raymond F., 604 W. Maple, Independence  
Gaskins, John Hayden, 520 Professional Bldg.  
Gay, Ray J., 3417 Gillham Road  
Geiter, Clyde W., 2000 Baltimore  
Gempel, Paul A., 315 Alameda Road  
Gentry, Enoch Nelson, Jr., 915 Argyle Bldg.  
Geraughty, Edward, 302 Shukert Bldg.  
Gestring, Hugh A., 303 Wirthman Bldg.  
Getelson, Joseph, 1218 Rialto Bldg.  
Gibson, Edward T., 1228 Professional Bldg.  
Gilkey, Harry M., 1624 Professional Bldg.  
Gilles, Clifford L., 1414 Professional Bldg.  
Gilliland, Oliver S., 814 Professional Bldg.  
Gillmor, Charles Stewart, 1226 Rialto Bldg.  
Ginsburg, A. Morris, 420 Professional Bldg.  
Ginsberg, Edward L., 350 E. Armour  
Ginsberg, Norman A., 221 E. 46th St.  
Gist, William L., 2950 Victor St.  
Gist, William Wilmet, 800 Professional Bldg.  
Glasscock, Ernest L., 507 Bryant Bldg.  
Goerner, Paul G., Raytown  
Goldman, Max, 1618 Professional Bldg.  
Goldman, Stanley Lyle, Univ. of Kan. Med. Center, Kansas City, Kan.  
Goodman, Leroy, 235 Plaza Time Bldg.  
Goodson, William H., Jr., Professional Bldg.  
Grabske, Charles F., 129 W. Lexington St., Independence  
Graham, James W., 518 Argyle Bldg.  
Graham, Wallace H., White House, Washington, D. C.  
Grandstaff, Eleanor H., Municipal Hospital No. 1  
Grauerholz, James William, 206 Congress Bldg.  
Greaves, Eli A., 1002 Argyle Bldg.  
Green, John R., First National Bank Bldg., Independence  
Green, Stanley L., First National Bank Bldg., Independence  
Greene, Joseph Wayne, Carl Bldg., Independence  
Greene, W. Wallace, 1032 Professional Bldg.  
Griffith, George W., 4000 Baltimore  
Growdon, John A., 1324 Professional Bldg.  
Guffey, Don Carlos, 717 Professional Bldg.  
Guggenheim, Lewis C., 3222 East 51st St.  
Haggen, Margaret E., 6228 Agnes St.  
Haight, John M., 3401 E. 12th St.  
Hall, D. Walton, 901 Waldheim Bldg.  
Hall, James R., 633 E. 72th St.  
Hall, Thomas Bryan, 902 Professional Bldg.  
Hallberg, John W., 231 West 47th St.  
Halperin, Phillip H., 409 Professional Bldg.  
Hamilton, Buford G., Richmond  
Hamilton, Hugh G., Plaza Time Bldg.  
Hansbro, Gerald L., 286 Plaza Theatre Bldg.  
Hardacre, Ruth Anna, 4247 Troost  
Harless, Morris S., 6247 Brookside  
Harrington, G. Leonard, 1124 Professional Bldg.  
Harrison, Addison M., 3425 Gillham Road  
Hart, William W., 2808 Campbell  
Hashinger, Edward H., 1500 Professional Bldg.  
Haynes, Lee, 901 Westport Road  
Haynes, Solon Earl, 1200 Professional Bldg.  
Heast, Allen L., 1100 Professional Bldg.  
Heller, B. Marcus, 416 Bryant Bldg.  
Helman, Richard G., 625 Professional Bldg.  
Herbst, Frank, 1025 Rialto Bldg.  
Herrman, George V., Plaza Time Bldg.  
Hess, Henry Lewis, 1207 Rialto Bldg.  
Hess, Paul D., 8423 High Drive  
Hetherington, Ellery M., 918 East 9th St.  
Hibbard, Blaine Zook, 209 Plaza Time Bldg.  
Hickerson, John C., First National Bank Bldg., Independence  
Hickerson, William H., First National Bank Bldg., Independence  
Higgins, Robert S., 1107 Bryant Bldg.  
Hill, Jack H., Trinity Lutheran Hospital  
Hill, Jesse N., 1428 Hedges Ave., Independence  
Hink, Frederick W., 10235 Independence Road  
Hodge, Robert H., North Kansas City  
Hodgson, Frank H., 4301 Main  
Hooper, Samuel D., 6232 Troost  
Hoffman, Jacob S., 300 E. 66th St. Terrace  
Hoffmann, R. Lee, 1019 Professional Bldg.  
Hoffmann, Ottokar, 806 Rialto Bldg.  
Hogan, Daniel F., 801½ W. 39th St.  
Hogue, Frank S., 315 Alameda Rd.  
Holbrook, Walter F., 1132 Professional Bldg.  
Hollis, Luther T., 2817 Charlotte St.  
Hollister, Wilbur L., Nixon, Texas  
Hollweg, Kenneth C., 448 E. 66th St.  
Hook, Waller C., 510 Professional Bldg.  
Horigan, Joseph A., 5 E. 54 Terrace  
Howard, John C., Jr., 1408 Professional Bldg.  
Howard, Joseph W., 6026 McGee St.  
Hoxie, George H., 2808 Hillegoss Ave., Berkeley 5, Calif.  
Hungate, Carroll P., 934 Argyle Bldg.  
Hunt, Claude J., 1612 Professional Bldg.  
Hunter, Martin P., 1408 Waldheim Bldg.  
Hurwitz, Frank, 400 Professional Bldg.  
Irland, Robert D., Union Station Hospital  
Irwig, Fred, 1610 Professional Bldg.  
Ivy, Henry B., Sunflower, Kan.  
Jackson, Carl A., 1103 Armour Blvd.  
Jackson, James O., Brooks General Hospital, Fort Sam Houston, Tex.  
Jackson, William R., 1107 Bryant Bldg.  
Jacob, Walter P., 702 Bryant Bldg.  
Jaime, Nicholas, 4050 Broadway  
Jansen, Robert, 2220 E. 31st St.  
Jarvis, James A., 236 Plaza Time Bldg.  
Jeffries, Robert C., 6315 Brookside Plaza  
Jennett, Harry N., 2701 Forest Ave.  
Jennett, James Harvey, Professional Bldg.  
Johnson, Carl L., 1316 Professional Bldg.  
Johnson, Edgar W., 1130 Rialto Bldg.  
Johnson, Edgar W., Jr., 286 Plaza Theatre Bldg.  
Johnson, Paul A., 121 N. Chelsea  
Johnson, Thomas Maxwell, 7237 Springfield  
Johnstone, Paul Nugent, 1110 Bryant Bldg.  
Jones, George H., 80th & Paseo Sts.  
Jones, Harry Lander, 1107 Bryant Bldg.  
Jones, Kneeland P., 1108 Troost  
Jones, Maurice L., 909 Argyle Bldg.  
Jones, Theodore R., 1107 Bryant Bldg.  
Juarez-Reyna, Guillermo, 1040 Argyle Bldg.  
Kantor, Julius M., 204 Argyle Bldg.  
Kealhofer, George C., 3447 Prospect  
Keeler, James E., 227 Plaza Medical Bldg.  
Keeling, Irene C., 822 W. 57th Terrace  
Keith, Willis E., 1416 Professional Bldg.  
Kelly, Eugene H., 402 Wabash Ave.  
Kennedy, John Oscar, 11th & Kansas Ave., Topeka, Kan.  
Kent, Bela Kaszas, 1302 Professional Bldg.  
Kent, Clifford F., 1306 Bryant Bldg.  
Kerr, Russell W., St. Joseph Hospital  
Ketcham, William M., 1408 Waldheim Bldg.  
Ketrn, Marvin B., 5933 Cherry St.  
Kienberger, Paul A., St. Joseph Hospital  
Kiene, Richard H., 1400 Professional Bldg.  
Kimball, Merritt H., 400 E. Armour  
Kitchen, William M., 1010 Rialto Bldg.  
Klein, Edward H., 200 Plaza Medical Bldg.  
Klempner, Dayton P., 500 Argyle Bldg.  
Knappenberger, George E., 5836 Bellevue  
Knerr, Ellsworth B., Address Unknown  
Knight, John S., 1622 Professional Bldg.  
Knight, Lyle B., 8 West 3rd St., Lees Summit, Mo.  
Knoch, H. Kermit, 612 Professional Bldg.  
Koehler, Charles A., 511 Wirthman Bldg.  
Koenig, Frank J., 1418 Professional Bldg.  
Kohn, Cecil M., 630 Professional Bldg.  
Korth, William M., 612 Professional Bldg.  
Kovitz, Louis, 1440 Professional Bldg.  
Kraft, Jacob, Menorah Hospital  
Kranson, Seymour J., 1210 Ash Ave., Independence  
Krueger, Owen W., 220 Argyle Bldg.



- Kuhn, William F., II, 4536 N. 27th St., Milwaukee, Wis.
- Kyger, E. Ross, 820 Greenway Terrace
- Kyger, Fred B., 510 Professional Bldg.
- Kyner, Thomas A., 214 Wirthman Bldg.
- Lacy, N. Eugene, Plaza Time Bldg.
- Laffoon, France L., Raytown
- Lakaytis, Charles A., 1002 Argyle Bldg.
- Lamar, Frederick C., 624 Professional Bldg.
- Lamar, Robert F., General Hospital
- Landis, George K., 1630 Professional Bldg.
- Laning, J. Halcorn, 6205 Brookside
- Lapp, Harry C., 1314 Professional Bldg.
- Lapp, Jahn G., 1314 Professional Bldg.
- Latham, Raymond W., Plaza Theatre Bldg.
- Laurenzana, Frank Paul, 428 South White
- Layton, Ira C., Argyle Bldg.
- Lee, Chester E., 1518 Professional Bldg.
- Lee, George C., 1630 Professional Bldg.
- Lehner, Richard L., 1630 Professional Bldg.
- Leifer, William W., 505 Professional Bldg.
- Leitch, Cecil George, 1109 Professional Bldg.
- Leitz, Frank Bantley, 1530 Professional Bldg.
- Lemoine, Albert N., Plaza Time Bldg.
- Lemoine, A. N., Jr., Plaza Time Bldg.
- Leonard, Ward H., 5838 Charlotte St.
- Levey, Harry B., 200 Argyle Bldg.
- Lewis, William E., 4435 Harrison St.
- Lieberman, B. Albert, 1002 Professional Bldg.
- Lieberman, B. Albert, Jr., 1002 Professional Bldg.
- Liersch, Joseph C., 400 Professional Bldg.
- Lilly, Terry Erastus, 807 Argyle Bldg.
- Lindquist, Carl N., 106 West 14th St.
- Link, Vance Eugene, First National Bank Bldg., Independence
- Littauer, David, 4949 Rockhill Road
- Lockwood, Ira H., 830 Argyle Bldg.
- Loewy, Louise B., 2625 Paseo
- Lowrey, Ford Jackson, 1032 Professional Bldg.
- Lucy, Robert E., 3500 Benton
- Lundgren, Fred H., Jr., 411 Alameda Road
- Luppens, Albert F., 3918 South Benton
- Lux, Paul, 2006 Bryant Bldg.
- Lyddon, Harold R., Jr., 75th & Troost
- McAlester, Andrew W., Jr., 2003 Bryant Bldg.
- McAlester, Andrew W., III, 2003 Bryant Bldg.
- McCalman, Ira J., 3903 Brooklyn Ave
- McCandless, Oliver H., 808 N. Noland, Independence
- McCarthy, William F., 313 South Liberty, Independence
- McCarty, Virgil Warren, 226 Plaza Time Bldg.
- McClanahan, Robert C., 820 Professional Bldg.
- McConchie, James E., First National Bank Bldg., Independence
- McCubbin, Clarence Roy, 400 Professional
- McCunniff, William B., St. Joseph Hosp. Bldg.
- McDonnell, John F., General Hospital No. 1
- McFarland, M. D., Plaza Medical Bldg.
- McHale, Thomas C., 4620 Independence Ave.
- McKee, Joseph W., 1332 Professional Bldg.
- McLeod, John, 636 Argyle Bldg.
- McMillan, Thomas E., 1019 Professional Bldg.
- McPherson, Owen P., 1424 Professional Bldg.
- McVay, James R., 814 Porter Bldg.
- MacInnis, Florence E., 618 Professional Bldg.
- Maclean, John A., Ventura, Calif.
- Major, Hermon S., 3100 Euclid Ave.
- Mantz, Herbert L., 618 Professional Bldg. Bldg.
- Marks, Mark M., 1420 Bryant Bldg.
- Marshall, Cameron F., 201 Plaza Theatre Bldg.
- Marty, Loraine A., Lakeview Heights
- Mayer, John H., Jr., 618 Professional Bldg.
- Merriman, Clay S., 8130 Holmes Ave.
- Middleton, James, 2446 North Ohio, Arlington, Va.
- Miles, George Oliver, 411 Alameda Road
- Miller, Clinton L., 8 West 3rd St., Lees Summit
- Miller, Gerald L., 1300 Professional Bldg.
- Miller, Hugh, 40 East 55th St.
- Miller, Wade Hampton, 1306 Bryant Bldg.
- Miller, Walter P., 800 Argyle Bldg.
- Mitchell, Robert H., 410 Bryant Bldg.
- Mixson, William C., 320 West 47th
- Mollica, Stephen G., 1828 Walnut St.
- Monahan, Elmer P., 814 Argyle Bldg.
- Montgomery, James Gordon, 1332 Professional Bldg.
- Mooney, Justin Loeb, 1420 Bryant Bldg.
- Mooney, Marcel L., 1420 Bryant Bldg.
- Moore, Louis T., Richland, Wash.
- Moore, Robert A., P. O. Box 679
- Moreland, George H., 520 Professional Bldg.
- Morest, F. Stanley, 1512 Professional Bldg.
- Morgan, David B., 1524 Professional Bldg.
- Morrow, Raymond L., 424 Professional Bldg.
- Moss, Paul, 1306 Bryant Bldg.
- Mueller, Martin J., 934 Argyle Bldg.
- Mueller, Ralph Edward, 600 Professional Bldg.
- Mullen, Leo M., 3548 Indiana
- Murphy, Robert J., 4301 Main St.
- Myers, Benjamin Lee, 815 Shukert Bldg.
- Myers, John L., 815 Shukert Bldg.
- Myers, John Simeon, 815 Shukert Bldg.
- Myers, Myron A., Glen Haven, Wis.
- Myers, Ralph R., Address Unknown
- Myers, Robert M., 1025 Rialto Bldg.
- Myers, W. Eugene, Iola, Kan.
- Myers, Wilson A., 815 Shukert Bldg.
- Nelson, Charles S., 3626½ Independence Ave.
- Nelson, James M., 772 Tamarach Ave., San Carlos, Calif.
- Nichols, Arthur L., Jr., 522 Professional Bldg.
- Nickson, Charles E., Jr., First National Bank Bldg., Independence
- Nigro, Dominick M., 925 Argyle Bldg.
- Nigro, E. Robert, 20 Prescott St., Cambridge, Mass.
- Nigro, Joseph Albert, 925 Argyle Bldg.
- Norberg, George B., 710 Commerce Bldg.
- Nunn, Pat Morris, 524 Southwest Blvd., Kansas City, Kansas
- O'Brien, Leo Aloysius, 1002 Argyle Bldg.
- O'Brien, Raymond W., 286 Plaza Theatre Bldg.
- O'Connell, P. J., 327 Argyle Bldg.
- Ockerblad, Nelse F., Plaza Time Bldg.
- Ogilvie, John H., 730 Professional Bldg.
- Ogilvie, Rial R., 522 Professional Bldg.
- O'Neill, James H., 825 Shukert Bldg.
- Osgood, George M., 915 Professional Bldg.
- Owens, Graham Joseph, 1034 Rialto Bldg.
- Owens, Hugh H., 1034 Rialto Bldg.
- Owens, Michael Joseph, 1034 Rialto Bldg.
- Owens, Robert Henry, 1034 Rialto Bldg.
- Pakula, Sidney F., 251 Plaza Time Bldg.
- Pallett, Harold A., 1132 Professional Bldg.
- Parker, Elmer L., 7429 W. 58th St., Shawnee, Kan.
- Parker, Hubert M., 520 Argyle Bldg.
- Parker, Joseph W., 4000 Baltimore
- Parsons, Eugene O., 315 Alameda Road
- Passman, Harold, Professional Bldg.
- Pearson, Paul E., 1025 Rialto Bldg.
- Peete, Don Carlos, 1500 Professional Bldg.
- Pendleton, George F., 933 Professional Bldg.
- Perill, Maurice F., 327 Argyle Bldg.
- Perill, Rita D., 4711 Central
- Perry, Ralph, 4800 East 24th St.
- Peterson, Milton C., 400 Professional Bldg.
- Petry, Ezra L., 300 Argyle Bldg.
- Pfuetze, Edwin L., 1424 Professional Bldg.
- Phelps, Charles Ray, General Hospital No. 1
- Pickard, Matthew W., Bloomfield Hills, Mich.
- Pickard, Nicholas S., 241 Plaza Time Bldg.
- Pickens, Edgar E., 4826 Roanoke Parkway
- Pierson, John B., General Hospital No. 1
- Pinkston, Omar W., Rockhill Manor
- Piper, Donald K., 1200 Professional Bldg.
- Pipkin, F. Garrett, 836 Argyle Bldg.
- Pittam, Jesse Thomas, 636 W. 57th St. Terrace
- Pittam, Radford F., 830 Professional Bldg.
- Platt, Paul C., 1614 City Hall
- Polk, George M., 11037 Winner Road, Independence
- Pollock, Leo Howard, 1310 Bryant Bldg.
- Poorman, Bert A., 2836 Prospect Ave.
- Porter, Louis, 400 Professional Bldg.
- Potter, Lee G., 724 Professional Bldg.
- Powers, John M., 2932 Lockridge
- Prentiss, Harry S., 900 Rialto Bldg.
- Preston, Albert, Jr., 1010 Professional Bldg.
- Price, William P., Fort Sam Houston, Texas
- Printz, Joseph H., 1025 Professional Bldg.
- Printz, Otto Jack, 229 Ward Parkway
- Quistgard, Paul Cameron, 6741 Prospect
- Rader, Ada Brainard, Martin City
- Ragan, Romulus C., 404½ West 75th St.
- Rannie, Paul R., Independence
- Reitz, Carl H., 404½ West 75th St.
- Remley, George C., 832 Argyle Bldg.
- Riller, Lowell E., 730 Professional Bldg.
- Rinkel, Herbert J., 2005 Bryant Bldg.
- Rising, Jesse D., 814 Professional Bldg.
- Roberts, Harold M., 1530 Professional Bldg.
- Roberts, Sam E., 1110 Professional Bldg.
- Robertson, James Archie, Traders Gate City Bank
- Robinson, David Beach, 928 Professional Bldg.
- Robinson, David Weaver, 1316 Professional Bldg.
- Robinson, Ernest Kip, 928 Professional Bldg.
- Robinson, G. Wilse, 2625 Paseo
- Robinson, G. Wilse, Jr., 2625 Paseo
- Rose, Charles William, 103 N. Elmwood
- Rosenwald, Leon, 929 Argyle Bldg.
- Roy, Gustave A., 159 Evelyn Drive, Anaheim, Calif.
- Rubnitz, Leon H., 400 Professional Bldg.
- Saferstein, A. Lester, 400 Professional Bldg.
- Saint Clair, Robert L., 101 S. Lawn
- Saladino, Anthony, 733 Rialto Bldg.
- Samuelson, Edward A., 2603 East 31st St.
- Sanders, Clarence E., 525 E. Armour Blvd.
- Sanders, William F., Professional Bldg.
- Saunders, Everett L., 121½ W. Lexington, Independence
- Scarpellino, Louis A., 36 E. 52nd St.
- Schaefer, Charles L., 3937 Main St.
- Schaeffer, Hans, 51st & White
- Schaeffer, William C., 1210 Professional Bldg.
- Schaffer, Richard C., St. Luke's Hospital
- Schaffner, Robert McE., 300 Argyle Bldg.
- Schiffmacher, Jack E., 700 Professional Bldg.
- Schmidt, Edward C. H., St. Luke's Hosp.
- Schorer, Edwin Henry, 1910 West 56th St.
- Schutz, Carl Bryant, 320 West 47th St.
- Schutz, Richard B., Plaza Time Bldg.
- Seely, Clark W., Plaza Time Bldg.
- Sewell, Minor F., 1722 West 39th St.
- Shapiro, Lazare Melvin, 628 Professional Bldg.
- Shears, Robert Newman, St. Joseph Hosp.
- Sheldon, John G., 604 Commerce Bank Bldg.
- Sheldon, John, Jr., Vineyard Park Hosp.
- Sherwood, Loraine, 4000 Baltimore
- Shofstall, Charles K., 300 W. 47th St.
- Shuey, Herbert H., 3903 Brooklyn
- Shumate, David L., 500 Argyle Bldg.
- Shypper, Moses J., 616 Shukert Bldg.
- Silvers, Alvin, 1702 Southwest Blvd., Kansas City, Kansas
- Simpson, Morris B., 1408 Professional Bldg.
- Sinclair, Alexander B., 4711 Central St.
- Singleton, J. Milton, 315 Alameda Road
- Skinner, Edward H., 1532 Professional Bldg.
- Skinner, John Osman, 1402 Bryant Bldg.
- Skinner, John T., 1402 Bryant Bldg.
- Skoog, Andrew L., 919 Rialto Bldg.
- Slusher, Ernest W., 806 Rialto Bldg.
- Small, Walter L., Hyde Park Hotel
- Smith, Arthur B., 830 Argyle Bldg.
- Smith, James D., 318 Professional Bldg.
- Smith, Robert W., Marceline, Mo.
- Snider, Samuel Harrison, 315 Alameda Road
- Snyderman, Henry, Wadsworth Veterans Hospital, Leavenworth, Kan.
- Soderberg, N. B., Address Unknown
- Sophian, Abraham, 1405 Bryant Bldg.
- Spafford, Allen Leo, 1030 Argyle Bldg.
- Staggs, William A., 822 Argyle Bldg.
- Staley, Harry R., 1308 Bryant Bldg.
- Stapp, Roth Van Allen, 1022 Argyle Bldg.
- Statland, Harry, 1406 Bryant Bldg.
- Steffen, Lawrence F., 1220 Professional Bldg.
- Stewart, John H., 1618 N. Court St., Ottumwa, Iowa
- Stockwell, A. Lloyd, 600 Professional Bldg.
- Strong, Richard M., General Hospital No. 1



Summers, Caldwell B., 222 Plaza Theatre Bldg.  
Sutton, Richard L., Jr., 729 Shukert Bldg.  
Sutton, Richard L., 256 Plaza Time Bldg.  
Swenson, Alvin L., 910 Professional Bldg., Phoenix, Ariz.  
Swisher, Robert C., 5509 Brookside  
Switzer, Clyde, Grandview  
Tarson, Solomon S., 509 Wirthman Bldg.  
Tasker, Charles B., 730 Professional Bldg.  
Teachenor, Frank R., 221 Plaza Time Bldg.  
Teall, Raymond E., 1016 Professional Bldg.  
Tesson, James Albert, 907 Rialto Bldg.  
Thiele, George H., 6526 High Dr  
Thiessen, Edward Herman, 1032 Professional Bldg.  
Thomason, Henry E., 1132 Professional Bldg.  
Thorn, Druey R., 1107 Bryant Bldg.  
Thurlow, Ralph M., 3701 Broadway  
Thym, Herman H., 411 Shukert Bldg.  
Townshend, Grafton D., 205 Argyle Bldg.  
Treharne, Frank E., 171 W. Walnut, Independence  
Trimble, William K., 834 Professional Bldg.  
Trippe, Harrison C., 1014 Argyle Bldg.  
Trowbridge, Barnard C., 300 W. 47th St.  
Trowbridge, Ellsworth Haydn, 1808 Bryant Bldg.  
Trowbridge, Ellsworth H., Jr., 206 Balcony Bldg.  
Tuthill, Herbert, 1211 Rialto Bldg.  
Tuttle, Floyd Wilkins, Blue Springs  
Twyman, Elmer D., 628 Orange Grove Ave., South Pasadena, Calif.  
Twyman, Richard A., 1314 Professional Bldg.  
Uhlmann, Robert, 1310 Bryant Bldg.

Alberty, Omer Lerov, Carl Junction  
Birsner, Frank H., Carthage  
Black, Mervin H., 516 Frisco Bldg., Joplin  
Blanke, Otto T., 725 Frisco Bldg., Joplin  
Blankenship, George W., Anderson  
Bragdon, George H., Reeds  
Burch, John E., 804 Frisco Bldg., Joplin  
Byrd, Homer E., Carthage  
Clinton, Lloyd B., Carthage  
Coates, Charles Clinton, Frisco Bldg., Joplin  
Coombs, Miller O., Frisco Bldg., Joplin  
Craig, Irwin T., 409 N. Pearl, Joplin  
Craig, William E., Moberly  
Crawford, Archie L., Frisco Bldg., Joplin  
DeTar, Burleigh Eli, 410 Jackson St., Joplin  
Douglass, John W., Joplin  
Douglass, Jesse Ellsworth, Webb City  
Eliscu, Juliette, Frisco Bldg., Joplin  
Ferguson, Robert M., Webb City  
Gale, Richard O., Welch, W. Va.  
Grantham, Samuel A., Jr., 420 Byers, Joplin  
Gregg, Arthur M., Frisco Bldg., Joplin  
Hall, Marvin F., Frisco Bldg., Joplin  
Hamilton, Eugene H., Frisco Bldg., Joplin  
Harris, Russell D., 605 N. W. 10th St.,

Bolgar, Bartholomew, Festus  
Commerford, James J., Crystal City  
Donnell, Robert Hart, Crystal City  
Donnell, Thomas A., DeSoto  
Edwards, T. Burton, Cedar Hill

Cooper, R. Lee, Warrensburg  
Damron, Oscar H., Warrensburg  
Grove, Gulph W., Knobnoster  
Harkness, Harry, Warrensburg  
Johnson, Charles S., Warrensburg

Carlton, Charles E., Stoutland  
Carrington, Howard W., Lebanon  
Casey, Shederic A., Lebanon  
Cramer, Quentin, Camdenton

Best, Robert, Higginsville  
Brady, Hugh, Concordia  
Braecklein, W. A., 114 E. 4th St., Tucson, Ariz.  
Brasher, Ben H., Lexington  
Garner, Lynn Mason, Jefferson City  
Kelling, Douglas G., Waverly

Underwood, Dick Holland, 1107 Bryant Bldg.  
Underwood, Harry A., 4712½ E. 24th St.  
Underwood, Johnson, Jr., 1600 Professional Bldg.  
Underwood, Ross Holland, 1107 Bryant Bldg.  
Unger, Harold, 1300 Bryant Bldg.  
Upsher, Albert E., St. Mary's Hospital  
Valentine, Herbert S., 1124 Professional Bldg.  
VanBiber, James T., Children's Hospital, Detroit, Mich.  
VanDel, Dwight T., 909 Professional Bldg.  
Vanorden, Herbert F., 6710 Edgevale Rd.  
Viley, Leland P., 5011 Walnut St.  
Virden, C. Edgar, 700 Professional Bldg.  
Virden, Herbert H., 700 Professional Bldg.  
Voegelin, Samuel, Vinyard Park Hospital  
Wade, Frederick E., 305 Professional Bldg.  
Wakefield, Franklin, Jr., 2004 Bryant Bldg.  
Walker, James Charles, 1424 Professional Bldg.  
Walker, John W., 830 Argyle Bldg.  
Wall, Arthur H., 153 Santa Anita, Sierra Madre, Calif.  
Wall, Harry C., Argyle Bldg.  
Wallace, Frank Barnett, Rialto Bldg.  
Walthall, Damon O., 315 Alameda Rd  
Watson, B. Frank, Address Unknown  
Watson, Ethel, 403 First National Bank Bldg., Independence  
Watson, James Donald, 6153 Oak St.  
Weaver, John S., 1111 Rialto Bldg.  
Webster, Joseph G., 612 Professional Bldg.  
Welker, Joseph E., 834 Professional Bldg.  
Wheeler, John H., 1500 Professional Bldg.  
White, Charles H., Mission, Kan.  
White, Edwin C., 1032 Professional Bldg.  
White, George A., 729 Shukert Bldg.

#### JASPER COUNTY MEDICAL SOCIETY

Oklahoma City, Okla.  
Hornback, Edward R., Frisco Bldg., Joplin  
Howard, Walter M., Frisco Bldg., Joplin  
Hurst, W. W., National Bank Bldg., Joplin  
Isbell, Charles H., Carthage  
James, Edward Dean, Frisco Bldg., Joplin  
James, Robert M., 504 Jackson, Joplin  
Jeans, V., Miners Bank Bldg., Joplin  
Johnson, Edward E., 510 Islington, Joplin  
Kenney, Verna Elbert, Miners Bank Bldg., Joplin  
Kuhn, John Raymond, Jr., Frisco Bldg., Joplin  
Laney, Ronald L., 4433 Main St., Joplin  
Leaming, Harry A., 421 N. Joplin, Joplin  
Loveland, William S., 2320 Joplin, Joplin  
McIntire, Emery J., 417 S. Main St., Carthage  
McNew, William T., Carthage  
Mack, Mary L., Frisco Bldg., Joplin  
Maddox, John D., Joplin  
Meredith, Guy Irving, Frisco Bldg., Joplin  
Mitchell, Ernest, Frisco Bldg., Joplin  
Myers, Roy E., Frisco Bldg., Joplin

#### JEFFERSON COUNTY MEDICAL SOCIETY

Fallet, Charles E., DeSoto  
Frerichs, John B., 3427 Washington, St. Louis  
Hopson, George, DeSoto  
McKinstry, Karl V., DeSoto

#### JOHNSON COUNTY MEDICAL SOCIETY

McKinney, Ralph F., Warrensburg  
Maxson, T. Reed, Warrensburg  
Parker, Harry F., Warrensburg  
Patterson, William R., Warrensburg

#### LACLEDE COUNTY MEDICAL SOCIETY

Froelick, Ray D., Lebanon  
Harrell, Roosevelt E., Lebanon  
Hope, James L., Lebanon  
Hurst, Ben B., Lebanon

#### LAFAYETTE COUNTY MEDICAL SOCIETY

Kelling, George A., Waverly  
Kelling, Jordan, Waverly  
Koppenbrink, Walter E., Higginsville  
Lissack, Edmund, Concordia  
Liston, Odus, Oak Grove  
Martin, Wilfred E., Odessa  
Moore, Ernest M., Higginsville  
Moore, Ernest M., Jr., Higginsville

White, Stoughton F., Wisconsin General Hospital, Madison, Wis.  
Whiteman, John R., 6247 Brookside  
Whitman, Doyle C., 6616 Agnes Ave.  
Wien, Irving A., 321 Argyle Bldg.  
Wilcox, Howard Lea, Boonville  
Wilkinson, Everett A., 1322 Professional Bldg.  
Willhelmy, Ellis W., Plaza Medical Bldg.  
Williams, Delon A., 806 Professional Bldg.  
Williams, Robert A., 5400 St. John Ave.  
Williams, Vincent T., 836 Argyle Bldg.  
Williamson, William P., 221 Plaza Time Bldg.  
Willits, Lyle G., 612 Professional Bldg.  
Willoughby, Jean B., 924 Professional Bldg.  
Wilson, Clifford C., 710 Professional Bldg.  
Wilson, Fernando I., 116 W. 47th St.  
Wilson, Hester J., 233 Plaza Time Bldg.  
Winkelman, Esther B., 4050 Broadway  
Winston, Bernard H., 256 Plaza Time Bldg.  
Wise, George W., 204 Plaza Time Bldg.  
Withers, Orval Raymond, 1418 Bryant Bldg.  
Wolf, Jack W., 206 Argyle Bldg.  
Wood, Laurence E., Plaza Time Bldg.  
Woodfin, Lyle L., 29 Park Drive, San Anselmo, Calif.  
Woods, Harold V., 121½ W. Lexington, Independence  
Wortmann, Robert F., 510 Professional Bldg.  
Wright, R. Paul, 1324 Professional Bldg.  
Yazel, Herman E., 733 Rialto Bldg.  
Young, Jesse W., 1401 Southwest Blvd., Kansas City, Kansas  
Zellermayer, Jacob, 1304 E. 82nd Terrace  
Ziegler, Allen M., 320 W. 47th St.  
Zoglin, Nathan M., 927 Argyle Bldg.  
Zuber, Harold V., 600 Professional Bldg.

Needels, Orval T., Webb City  
Neff, Robert Lee, Frisco Bldg., Joplin  
Newkirk, Richard C., Frisco Bldg., Joplin  
Poor, Carl William, Diamond  
Post, Winfred L., 617 Joplin St., Joplin  
Powers, Everett, Carthage  
Prichett, Paul L., Webb City  
Reid, Charles T., Frisco Bldg., Joplin  
Rosenthal, Frances E., Frisco Bldg., Joplin  
Schoeberl, C. B., Frisco Bldg., Joplin  
Schulte, G. A., 622½ Main St., Joplin  
Scorse, Sidney W., Frisco Bldg., Joplin  
Simmons, Leroy, Sarcouxie  
Sims, John L., 606 Frisco Bldg., Joplin  
Smith, William Russell, 227 S. Main St., Carthage  
Stormont, Riley McMillan, Webb City  
Van Urk, Jules B., 414 Grant St., Carthage  
Walker, Paul William, Frisco Bldg., Joplin  
Webster, Roger W., 369 Crest Drive, San Jose, Calif.  
Whitten, M. Foster, Carthage  
Wilbur, Herbert L., 617 Empire, Joplin  
Wood, George H., Carthage  
York, William Bransford, Sarcouxie

Reich, Oliver F., Kimmswich  
Rutledge, John Frederick, Crystal City  
Senn, Emmett J., Herculeaneum  
Sum, Othmar J., Barnhart  
Yoskit, Harry, Festus

Rawlins, Kelly, Holden  
Ridge, Frank I., 241 Time Bldg., Kansas City  
Schofield, Linn J., Warrensburg  
Thompson, William G., Holden

Jenkins, Paul A., Lebanon  
Lindsay, John W., Conway  
Peckham, John W., Koch  
Summers, Jacob H., Lebanon

Nisbet, Eliga Bassett, Odessa  
Ryland, Caius T., Lexington  
Schooley, Renick C., Odessa  
Wallace, Edwin S., Georgetown University, Washington, D. C.  
Ward, Joe, Lexington  
Willis, John Buren, Mayview



## Cook County Graduate School of Medicine

### Announces Continuous Courses

**SURGERY**—Intensive Course in Surgical Technique, two weeks, starting February 21, March 21. Surgical Technique, Surgical Anatomy and Clinical Surgery, four weeks, starting February 7, March 7.

Surgical Anatomy and Clinical Surgery, two weeks, starting February 21, March 21, April 18. Surgery of Colon and Rectum, one week, starting March 7, April 11.

Surgical Pathology, every two weeks.

**GYNECOLOGY**—Intensive Course, two weeks, starting February 21, March 21.

Vaginal Approach to Pelvic Surgery, one week, starting February 14, April 4.

**OBSTETRICS**—Intensive Course, two weeks, starting March 7, April 4.

**MEDICINE**—Intensive Course, two weeks starting April 4.

Personal Course in Gastroscopy, two weeks, starting March 7.

Electrocardiography, four weeks, starting March 16.

**PEDIATRICS**—Intensive Course, two weeks, starting April 4.

**DERMATOLOGY**—Formal Course, two weeks, starting May 2.

Clinical Course every two weeks.

**CYSTOSCOPY**—Ten Day Practical Course every two weeks.

**ROENTGENOLOGY**—Lecture and Diagnostic Course two weeks, starting the first Monday of every month.

Clinical Course starting third Monday of every month.

GENERAL, INTENSIVE AND SPECIAL COURSES IN ALL BRANCHES OF MEDICINE, SURGERY AND THE SPECIALTIES.

Teaching Faculty—Attending Staff, Cook County Hospital

Registrar, 427 South Honore St., Chicago 12, Ill.

## PROMISE... and Performance



Born 1820...

Still going strong



Yes, Johnnie Walker  
always delivers as  
promised. When you  
savour this smoother-  
than-smooth Scotch,  
you always enjoy  
whisky of superlative  
mellowness and rich-  
ness of flavour to the  
very last sip.

RED LABEL

BLACK LABEL

Both 86.8 proof

# JOHNNIE WALKER

BLENDED SCOTCH WHISKY

Canada Dry Ginger Ale, Inc., New York, N. Y.

Sole Importer

## ACCIDENT • HOSPITAL • SICKNESS INSURANCE FOR PHYSICIANS, SURGEONS, DENTISTS EXCLUSIVELY



\$5,000.00 accidental death	\$ 8.00
\$25.00 weekly indemnity, accident and sickness	quarterly
\$10,000.00 accidental death	\$16.00
\$50.00 weekly indemnity, accident and sickness	quarterly
\$15,000.00 accidental death	\$24.00
\$75.00 weekly indemnity, accident and sickness	quarterly
\$20,000.00 accidental death	\$32.00
\$100.00 weekly indemnity, accident and sickness	quarterly

Also Hospital Expense for Members  
Wives and Children

85c out of each \$1.00 gross income used for  
members' benefit

INVESTED ASSETS	PAID FOR CLAIMS
\$3,000,000.00	\$15,000,000.00

\$200,000.00 deposited with State of Nebraska for  
protection of our members.

Disability need not be incurred in line of duty—benefits  
from the beginning day of disability

PHYSICIANS CASUALTY ASSOCIATION  
PHYSICIANS HEALTH ASSOCIATION

46 years under the same management  
400 First National Bank Building, OMAHA 2, NEBRASKA

**LEWIS-CLARK-SCOTLAND COUNTY MEDICAL SOCIETY**

Bridges, James R., Kahoka  
Davis, Landis Y., Canton

Ellery, William L., LaGrange  
Jennings, Perry Wells, Canton

Johansen, Frederick A., U. S. Marine  
Hospital No. 66, Carville, La.  
Lillard, Archie H., LaBelle

Creech, Joseph C., Troy  
Damron, E. O., Elsberry  
Harris, Harold S., Troy

**LINCOLN COUNTY MEDICAL SOCIETY**

Hicks, Edward A., Troy  
Keeling, Forrest V., Elsberry

Neunlist, Percy C., Old Monroe  
Penn, Robert McCulloch, Silcox  
Woeger, Jacob G., Whiteside

**LINN COUNTY MEDICAL SOCIETY**

Bohnsack, Ralph W., Brookfield  
Brownfield, Samuel T., Brookfield  
Campbell, C. A., Address Unknown  
Cantwell, James L., Bucklin

Dixon, John Rex, Brookfield  
Ellis, William Wesley, Marceline  
Haley, Roy R., Brookfield

Lucas, John H., Brookfield  
McArtor, Thomas R., Browning  
Ottman, Philip A., Marceline  
Rhoads, Mark H., Brookfield

**MARION-RALLS COUNTY MEDICAL SOCIETY**

Birney, William P., Hannibal  
Blue, Arthur B., Hannibal  
Brown, John E., Perry  
Burns, Francis R., Hannibal  
Canella, John M., Hannibal  
Chilton, James C., Hannibal  
Francka, W. F., Hannibal  
Goodrich, Howard B., Hannibal  
Greene, Harry L., Hannibal  
Hamlin, Wyeth, Palmyra

Hardesty, Joel W., Hannibal  
Hornback, George A., Hannibal  
Kibbe, John H., Monroe City  
Landau, Daniel B., Hannibal  
Lanning, Robert J., Hannibal  
Lucke, Eugene M., Hannibal  
Malley, John A., Quincy, Ill.  
Motley, Elliott R., Kinderhook, Ill.  
Murphy, Bernard L., Hannibal  
Norton, Harry B., Hannibal

Pipkin, Walter D., Monroe City  
Reichman, John J., Hannibal  
Roller, Merrill Joseph, Hannibal  
Salyer, Charles E., State Hospital No. 2,  
St. Joseph  
Smith, Ulysses S., Hannibal  
Smith, William Jewell, Hannibal  
Sultzman, Francis E., Hannibal  
Wachowiak, Marion, Palmyra  
Well, J. W., Palmyra

Bristow, Arthur Shaw, Princeton  
Bristow, George B., Princeton  
Bristow, Robert B., Princeton

**MERCER COUNTY MEDICAL SOCIETY**

Duff, Talbot S., Cainsville  
Lambert, Marian, Princeton  
Laws, Clarence J., Princeton  
Perry, John M., Princeton

Pickett, Clarence P., Princeton  
Sellers, C. J., Mt. Moriah  
Stacy, Emmett Winton, Princeton

Allee, Warren L., Eldon

**MILLER COUNTY MEDICAL SOCIETY**

Buehler, Carl T., Jr., Eldon  
Shelton, Edward Olney, Eldon

Walker, Grant D., Eldon

Baur, Paul S., Cairo, Ill.  
Davis, Wilbur L., Charleston  
Marshall, Alfred H., Charleston

**MISSISSIPPI COUNTY MEDICAL SOCIETY**

Martin, Albert J., East Prairie  
Presnell, Charles C., Charleston

Rolwing, E. Charles, Charleston  
Whitaker, George W., East Prairie  
Whitaker, Topsy T. H., East Prairie

Burke, John P., Jr., California  
Hume, Harold C., Tipton

**MONITEAU COUNTY MEDICAL SOCIETY**

Kibbe, Edgar A., California  
Latham, Kenyon S., California

Latham, Logan L., California  
Popejoy, H. R., California

Andersen, Elmer John T., Montgomery  
City

**MONTGOMERY COUNTY MEDICAL SOCIETY**

Byland, Samuel J., Wellsville  
Helm, James O., New Florence

Hirsch, Albert, Middletown  
Menefee, Buell, Montgomery City

Gunn, Aubrey J., Versailles

**MORGAN COUNTY MEDICAL SOCIETY**

Washburn, J. Loren, Versailles

Allenstein, B. J., New Madrid  
Carter, Harvey W., Portageville  
Chandler, Orville B., New Madrid  
Ellis, Burnett Eston, Gideon

**NEW MADRID COUNTY MEDICAL SOCIETY**

Hopkins, F. G., Gideon  
Husted, George W., Parma  
Jones, Edward E., Lilbourn  
Killion, John J., Portageville

McRaven, Claude, Marston  
Mullen, Park C., Portageville  
Sarno, S. M., Morehouse  
Smith, Louis J., New Madrid

Bowman, Melvin C., Neosho  
Cardwell, Clarence, Stella  
Carter, James R., Neosho  
Davis, Paul C., Neosho  
Duemler, Rutherford S., Seneca

**NEWTON COUNTY MEDICAL SOCIETY**

Duemler, Thomas B., Seneca  
Guthrie, John A., Neosho  
Lamson, Roy C., Neosho  
Lentz, Harold C., Neosho

Maness, C. E., Neosho  
Reynolds, James R., Neosho  
Rolens, Louis E., Granby  
Taylor, Leo T., Neosho  
Whitehead, Frank F., Neosho

**NODAWAY-ATCHISON-GENTRY-WORTH COUNTY MEDICAL SOCIETY**

Bauman, Henry C., Maryville  
Bell, Charles T., Maryville  
Blacklock, David E., King City  
Bloomer, Joseph Arnold, Maryville  
Byland, Benjamin F., Maryville  
Campbell, William S., Albany  
Cossins, Carlos E., State Hospital No. 2,  
St. Joseph  
Crowson, Eugene L., Pickering

Dean, Leslie E., Maryville  
Haskell, Claude D., Tarkio  
Humberd, Charles D., Barnard  
Imes, Elvin D., Maryville  
Jackson, W. R., Maryville  
Kadull, Paul J., Conception Junction  
Kirk, Charlie W., Hopkins  
Matteson, Frank B., Grant City  
Person, Robert C., Maryville

Reutter, Garfield A., Rockport  
Rose, Frank H., Albany  
Rosenthal, Arthur D., Address Unknown  
Ross, Pren J., Grant City  
Settle, Charles T., Rockport  
Settle, Emmett B., Rockport  
Wallace, Leo F., Glasco, Kan.  
Waugh, Clifton M., Tarkio  
Wempe, G. Raymond, Tarkio

**NORTH CENTRAL COUNTIES MEDICAL SOCIETY**

(Adair-Schuyler-Knox-Sullivan-Putnam)

Cramb, Arthur B., Kirksville  
English, Milton T., Jr., Kirksville  
Freeman, Spencer L., Kirksville  
Gashwiler, J. Schooling, Novinger  
Gerwig, Henry Eugene, Downing  
Grim, George E., Kirksville  
Hanks, Ralf, Kirksville  
Hart, Pearl Vance, Coatesville  
Henry, Clifford E., Kirksville

Herington, Warner, Green City  
Holman, Jurney H., Unionville  
Hudson, G. R., Kirksville  
Humphrey, Henry M., Brashear  
Jones, John Ben, Kirksville  
Luman, Frank E., Edina  
Miller, Alfred F., University of Tennessee,  
Knoxville, Tenn.

Miltenberger, Val E., Kirksville  
Montgomery, Enoch A., Unionville  
Montgomery, John S., Milan  
Nulton, Ida May, Lancaster  
Smith, Edward S., Kirksville  
Stickler, Ralph O., Kirksville  
Sullivan, William J., V. A. Hospital, Prov-  
idence, R. I.  
Wimp, J. J., Kirksville

**OZARKS COUNTY MEDICAL SOCIETY**

(Barry-Lawrence-Stone-Christian-Taney)

Brasher, Charles A., Mt. Vernon  
Burney, Wallace S., Miller  
Capetti, Alex P., Aurora  
Coffman, Esther E. L., 4139a Connecticut  
St., St. Louis  
Cottrell, Wilson P., Reeds Spring  
Cowan, R. D., Aurora  
Dickman, Roy, Mt. Vernon  
Donley, Robert R., Monett

Edwards, Francis L., Pierce City  
Evans, Harry Troy, Branson  
Farthing, Robert R., Ozark  
Ferguson, Lewis H., Monett  
Ferguson, L. H., Jr., Veterans Hospital,  
Alexandria, La.  
Fujikawa, Y. F., Mount Vernon  
Glover, Kenneth, Mt. Vernon  
Graves, Arthur J., Mt. Vernon

Hargrove, Fred T., Jefferson Barracks  
Hilweg, Charles E., Mount Vernon  
Herron, W. Floyd, Aurora  
Holmes, Lemuel Isaac, Miller  
Holmes, Mansell B., Veterans Hospital,  
Tuscaloosa, Ala.  
Holmes, Prince Albert, Mount Vernon  
Kerr, Frank T., Monett  
Kerr, Homer L., Crane



Knowles, Harry P., Rockaway Beach  
McCallum, A. J. C., Aurora  
Merriam, Wallace, 36th & Broadway, Kansas City  
Moennighoff, Fritz J., Monett  
Newman, George W., Cassville  
Newman, Mary Jane N., Cassville

Aquino, Philip Joseph, Caruthersville  
Beecher, Sheldon B., Caruthersville  
Bond, Francis G., Hayti  
Cain, Charles F., Caruthersville  
Castles, Charles C., Caruthersville

Bailey, William H., Perryville  
Bredall, Jerome Julian, Perryville

Beckemeyer, William A., 120 W. 5th St.  
Bess, William E., 210½ S. Ohio St.  
Bishop, William T., 616 W. Sixth St.  
Boger, James Walter, Sedalia  
Brady, Charles H., 205 Ilgenfritz Bldg.  
Campbell, Albert J., 312½ S. Ohio  
Cannady, J. E., 312½ S. Ohio  
Carlisle, John B., 312½ S. Ohio  
Dyer, David P., 301 Sedalia Trust Bldg.  
Edwards, D. R., 107½ South Ohio  
Fogle, Robert L., Otterville  
Gonser, Karl B., Sedalia

Baysinger, Stuart Lee, Rolla  
Breuer, Robert E., Newburg  
Buckthorpe, Thelma C., Waynesville  
Davis, Harry H., Rolla  
Dillon, William George, Salem  
Drake, Avery Ala, Rolla  
Elders, Frank A., Jr., Cuba  
Everist, Guy V., Rolla  
Feind, Earl Everett, Rolla  
Hammmer, Christiana Victoria, St. James

Andrae, Robert L., Louisiana  
Bankhead, Charles L., Paynesville  
Barrymore, Eugene, Bowling Green  
Bartlett, Ezekiel M., Clarksville

Calvert, Lewis C., Weston  
Durham, Silas L., Dearborn

Buehrer, Cletus E., Lawson  
Cockrell, John L., Address Unknown  
Cook, Thomas Francis, Richmond

Barnard, Charles A., Portage des Sioux  
Behan, Lawrence G., O'Fallon  
Budke, Robert J., St. Charles  
Canty, Eugene E., St. Charles  
Clay, Calvin, St. Charles  
Dyer, John H., Warrenton

Appleberry, Charles Homer, Flat River  
Appleberry, Dailey, River Mines  
Aubuchon, William Eli, Leadwood  
Barron, W. Harry, Fredericktown  
Bugg, Andrew F., Ellington  
Bull, Ben M., Ironton  
Chilton, J. A., Address Unknown  
Cline, Harold H., Piedmont  
Crouch, F. Richard, Farmington  
Evans, Albert L., Bonne Terre  
Farrar, C. B., Flat River  
Foster, Jack Lee, Desloge

Clapsaddle, Clare J., Ste. Genevieve

Aff, Helen M., R. R. No. 1, Box 655, Clayton  
Alex, Morris, 5622 Enright St., St. Louis  
Altheide, Harvey E., 9621 Manchester, Rock Hill  
Armstrong, John H., 321 N. Kirkwood Road, Kirkwood  
Aylward, H. J., 719 Metropolitan Bldg., St. Louis  
Backlar, Joseph, 1025 McKnight Road, Richmond Heights

Pickett, F. J., Vandalia, Ill.  
Robertson, Robert C., Veterans Administration, St. Cloud, Minn.  
Roper, Stanley D., Ozark  
Russell, James M., Monett  
Shumate, L. St. Clair, Reeds Spring  
Spears, Charles A., Billings

#### PEMISCOT COUNTY MEDICAL SOCIETY

Chapman, J. R., Steele  
Cook, O. W., Caruthersville  
Cooper, Lawrence E., Cooter  
Denton, Levi D., Hayti  
Limbaugh, Walter R., Hayti  
Luten, Joseph B., Caruthersville

#### PERRY COUNTY MEDICAL SOCIETY

Carron, Oscar A., Perryville  
Feltz, L. W., Perryville

#### PETTIS COUNTY MEDICAL SOCIETY

(Sedalia)

Heaton, Asa H., 310 W. Broadway  
Hite, Henry A., Green Ridge  
Holtzen, Ernst Emil, Smithton  
Long, Frank B., Ilgenfritz Bldg.  
Mitchell, John E., 810 S. Barrett  
Monroe, Alfred E., 111 W. 4th St.  
Murray, John Watts, 410 W. Broadway  
Osborne, Charles D., 113½ East 4th St.  
Parkhurst, Charles L., Houstonia  
Rhodes, Euhlan L., 312½ S. Ohio  
Rodeman, John M., 317 Ilgenfritz Bldg.

Stokes, Julius B., V. A. Hospital, Springfield  
Threadgill, Jesse Mercer, Forsyth  
Wade, James H., Ozark  
Wasson, Wesley B., Nixa  
West, William M., Monett  
Wommack, Fred L., Crane

Phipps, George W., Caruthersville  
Pinion, John R., Caruthersville  
Roberson, John H., Hayti  
Shirey, Arnold G., Hayti  
Taylor, Edward L., Steele

Fischer, Theodore, Altenburg  
Miller, Oliver Jerome, Perryville

Schaefer, Edward H., 809 S. Lamine  
Shy, Milton P., 1023 W. 7th St.  
Siegel, Peter Vincent, Smithton  
Snively, Edmund Callaway, 500½ South Ohio  
Stauffacher, C. Gordon, 101½ South Ohio  
Titsworth, Guy, 917 West 3rd St.  
Trader, Charles B., Porter Montgomery Bldg.  
Walker, William E., La Monte  
Walter, Archie L., 120 W. 5th St.  
Wheeler, William M., 500½ South Ohio

#### PHELPS-CRAWFORD-DENT-PULASKI COUNTY MEDICAL SOCIETY

Hart, Martin M., Salem  
Henson, Lafayette L., Bunker  
Herzog, Gustav G. A., Cuba  
Hughes, Edgar O., Dixon  
Hunt, Lloyd Hendrix, Salem  
Irwin, William F., Leasburg  
Joseph, George Earl, Salem  
Knowles, Roy F., Rolla  
Lytle, William R., Waynesville  
McFarland, A. Sidney, Rolla  
Mallette, Cyrus, Crocker

#### PIKE COUNTY MEDICAL SOCIETY

Biggs, James Brown, Bowling Green  
Cunningham, Eric Alton, Louisiana  
Johnson, Q. Ray, Jr., Louisiana  
Lewellen, Charles H., Louisiana

Miller, Clyde S., Waynesville  
Myers, James M., Rolla  
Parker, Rainey C., Steelville  
Reed, R. W., Richland  
Reeves, George W., Fulton  
Roock, Paul Carl, Richland  
Scott, Elijah A., St. James  
Stricker, Emil A., St. James  
Underwood, John B., St. James  
Underwood, Millard K., Rolla

Lewellen, Charles P., Louisiana  
Scott, Clive Douglas, Louisiana  
Treadway, W. W., Silcox  
Wilcoxon, William B., Bowling Green

#### PLATTE COUNTY MEDICAL SOCIETY

Langford, E. K., Platte City

Parker, H. Graham, Platte City  
Underwood, Johnson, Parkville

#### RAY COUNTY MEDICAL SOCIETY

Gay, Elmer Elwyn, Richmond  
Goldberg, Isadore Edward, Braymer

Greene, Luther D., Richmond  
Johnson, M. C., Richmond  
Shouse, Edwin, Lawson

#### ST. CHARLES COUNTY MEDICAL SOCIETY

Hardin, Thomas L., St. Charles  
Hayden, Ralph O., St. Charles  
Huger, Raymond H., Wright City  
Jenkins, Joseph M., St. Charles  
Kister, George E., St. Charles  
McIntire, Landon R., St. Charles  
McMurray, Herbert C., Wentzville

Miller, Ralph N., Portersville, Calif.  
Neubeiser, Ben L., St. Charles  
Schneider, Vincent A., St. Charles  
Schulz, Arthur P., Erich, St. Charles  
Sasaki, George Ryoichi, St. Charles  
Towers, Orville W., St. Charles

#### ST. FRANCOIS-IRON-MADISON-WASHINGTON-REYNOLDS COUNTY MEDICAL SOCIETY

Gaeb, Harold Carl, Desloge  
Gale, Frank W., Bismarck  
Gay, George, Ironton  
Grossman, Marvin, Fredericktown  
Harland, R. E., Ironton  
Haw, Marvin T., Jr., Bonne Terre  
Hocter, Emmett F., Farmington  
Hunt, John W., Jr., Leadwood  
Lanzafame, S. Anthony, Farmington  
Martin, James Hardy, Ironton  
Nichols, Frank J., Mokane

Pyrle, James Robert, Centerville  
Robinson, Bradbury J., Farmington  
Roebber, H. M., Bonne Terre  
Shepherd, H. C., Enumclair, Wash.  
Slaughter, Shelby C., Fredericktown  
Sutton, Charles E., Bonne Terre  
Taylor, Van William, Bonne Terre  
Thurman, Joseph Lynn, Potosi  
Wallace, Edgar S., Potosi  
Watkins, George L., Farmington  
Watkins, George L., Jr., Farmington  
Yeargain, J. P., Irondale

#### STE. GENEVIEVE COUNTY MEDICAL SOCIETY

Lanning, Richard Charles, Ste. Genevieve  
Lanning, Robert W., Ste. Genevieve

Sexauer, Arthur E., Ste. Genevieve

#### ST. LOUIS COUNTY MEDICAL SOCIETY

Bailey, William Harold, 1242 Missouri Bldg., St. Louis  
Barnes, Francis M., 4952 Maryland Ave., St. Louis  
Barnes, Raymond Frank, 22 N. Elm., Webster Groves  
Barnett, Julian H., 243 West Jefferson, Kirkwood  
Bassett, Sam A., 1250 Big Bend Road, St. Louis

Beamer, Parker R., 6908 Millbrook Blvd., University City  
Berland, Harry I., 996 Arcade Bldg., St. Louis  
Bernstorff, Paul H., 3919a W. Florissant, St. Louis  
Berwald, Irwin I., 7353 Balson Ave., University City  
Bierman, Martyn H., Jr., 10300 Lackland Road, St. Louis

- Blackman, Nathan, 300 Altus Pl., Kirkwood  
Blanchard, Irene M., 213 E. Lockwood Ave., Webster Groves  
Bone, Merle, 8671 Burton Ave., Overland  
Bortnick, Arthur R., 7548 Teasdale, University City  
Bosserman, David C., Elsa, Texas  
Brand, Earl LeRoy, 120 E. Lockwood Ave., Webster Groves  
Briscoe, John R., 2648 Oakview Terrace, Maplewood  
Brossard, Pierre M., 3500 Cambridge Ave., Maplewood  
Brown, Eugene Robertson, 7433 Gannon Ave., University City  
Brown, Thomas K., 7439 Buckingham Drive, St. Louis  
Brown, William Sidney, 410 Wall Bldg., St. Louis  
Brown, Wilson G., 621 Simmons, Kirkwood  
Burford, Thomas H., 6903 Millbrook Blvd., University City  
Bukantz, Sam. Charles, 225 N. Meramec Ave., Clayton  
Canepa, Francis John, 462 N. Taylor Ave., St. Louis  
Canepa, John B., 3417 Longfellow Blvd., St. Louis  
Clark, Richard G., 1132 Hill Top Drive, St. Louis  
Coldwater, Kenneth B., No. 7 Hancock Ave., Jefferson Barracks  
Cole, Bart, V. A. Hospital, Jefferson Barracks  
Coleman, William G., 3903 Olive St., St. Louis  
Colgate, Cleon Edward, U. S. N. R., Vets. Adm., Amarillo, Texas  
Cone, Alfred J., No. 2 Wood Mill, Chesterfield  
Cremton, James Roy, 6122a Page, St. Louis  
Cooke, Jean V., 6130 Garesche Ave., St. Louis  
Corgill, Donald A., Veterans Hospital, Jefferson Barracks  
Corlev, Henry N., 3711 Utah Place, St. Louis  
Castrino, Joseph A., 2407 N. Broadway, St. Louis  
Dalv, John R., 2703 Lynch St., St. Louis  
Davidson, Morris, 906 Olive Street, St. Louis  
Davis, Irl R., 1492 Hodiamont St., St. Louis  
Davis, Phillips Norton, 14th Air Force, Tangerine, Fla.  
Dennv, Chester H., Creve Coeur  
Denny, Robert B., 7827 Delmar, University City  
Diehr, Maurice August, 8924a St. Charles Rock Road, St. Louis  
Dill, Foster Alfred, 7348 Manchester, Maplewood  
Dowd, James F., Jr., 7059 Lindell Blvd., University City  
Drescher, Emmett B., 411 Beaumont Bldg., St. Louis  
Dyer, Clyde P., 307 Metropolitan Bldg., St. Louis  
Ellison, Leroy E., 7346 Myrtle Ave., Maplewood  
Elson, Julius, 7330 Pershing, University City  
Emery, Edgar V. N., 4668 Pershing Ave., St. Louis  
Evans, Emerv E., 6121 Easton, St. Louis  
Farris, H. G., 4660 Maryland Ave., St. Louis  
Fineert, H. H., 4952 Maryland Ave., St. Louis  
Finley, Freeman L., 9416 Lackland Road, Overland  
Flvnn, George W., 3732 Jennings Road, St. Louis  
Forsman, Waldo W., Jr., 9436 Gravois, Affton  
Foster, Robert L., 511 N. Taylor, St. Louis  
Fredericks, Edward L., Address Unknown  
Freiheit, Harold J., 9856 Affton Pl., Affton  
Froelich, Edwin J., 3635 N. Newstead, St. Louis  
Fuchs, George J., 608 Kingsland, St. Louis  
Gage, Helen L. B., 16 North Gore Ave., Webster Groves  
Gaines, Quentin McD., 508 N. Kirkwood Road, Kirkwood  
Gaston, Ralph E., 17 E. Lockwood Ave., Webster Groves  
Gaunt, Frank P., 13a North Gore, Webster Groves  
Gaunt, Frank P., Jr., 5738 W. Florissant, St. Louis  
Gebert, Clara M., Valley Park  
Gilliland, Charles E., 7270 Natural Bridge Road, St. Louis  
Gitt, Joseph Julian, 6164 Pershing Ave., St. Louis  
Goldman, Hyman J., 440 N. Taylor, St. Louis  
Goodman, J. N., 9 Frederick Lane, Glendale  
Goodman, Nathaniel, 8735 Antler, Richmond Heights  
Goodrich, Harold Arrott, 17 E. Lockwood Ave., Webster Groves  
Gowen, Leo F., 9 Highland Place, Glendale  
Graeser, Richard G., 306 E. Jefferson Ave., Kirkwood  
Griot, Albert J., 3109 S. Grand Blvd., St. Louis  
Groom, Horace Ensign, 1359 McCutcheon Road, Richmond Heights  
Grosskreutz, Joseph A., 3601 Canna Drive, St. Louis  
Hageman, Paul O., 1018 Beaumont Bldg., St. Louis  
Hale, Tyre H., 205 Roosevelt Hotel Bldg., St. Louis  
Halpern, Lawrence K., 3720 Washington, St. Louis  
Hampton, Oscar P., Jr., 8153 Stanford Court, St. Louis  
Hamtil, Edward William, 1504 S. Grand Blvd., St. Louis  
Hanlon, Thomas J., V. A. Hospital, Muskogee, Oklahoma  
Hans, Willard J., 4335 Virginia Ave., St. Louis  
Hardy, Guerdan, 8007 Teasdale, University City  
Harrison, Stanley L., 8023 Crescent, Clayton  
Hayward, John Dawson, 814 Metropolitan Bldg., St. Louis  
Heideman, Milo L., 333 Metropolitan Bldg., St. Louis  
Helbing, Edward J., 3903 Olive St., St. Louis  
Hendin, Aaron, 1028 Groby Road, University City  
Hengen, Henry E., Pattonville  
Hertel, Albert L., 3606 Gravois, St. Louis  
Hobbs, Alonzo G., 3903 Olive St., St. Louis  
Hobbs, Clarence L., 409 Chemical Bldg., St. Louis  
Hobbs, John E., 630 S. Kingshighway, St. Louis  
Hofsommer, Armin C., 337 W. Lockwood, Webster Groves  
Holden, Raymond F., 3720 Washington Blvd., St. Louis  
Holscher, Edward C., 203 Beaumont Bldg., St. Louis  
Howe, Louis Francis, 2511 Brentwood Blvd., Brentwood  
Huck, Frank F., Fenton  
Hughes, Clarence Orville, 9a S. Florissant Road, Ferguson  
Irick, Carl C., 227 E. Lockwood Ave., Webster Groves  
Jacobs, Gustave E., Humboldt Bldg., St. Louis  
Jansen, Richard W., Box 347, Manchester  
Jensen, Julius, 716 Beaumont Bldg., St. Louis  
Johnson, Roy, 40 N. Florissant Road, Ferguson  
Jones, Augustin, 31 N. Brentwood, Clayton  
Jones, Dorothy J., 4500 Olive St., St. Louis  
Jones, Garnett, St. Clair  
Jones, James B., 337 W. Lockwood, Webster Groves  
Kelley, Walter L., 9915 Gravois Road, Affton  
Kendis, Joseph B., 462 N. Taylor Ave., St. Louis  
Kent, Leonard, 7604 Fairham Ave., University City  
Kessler, Joseph John, 3504 N. 14th St., St. Louis  
Kilker, Clarence Howard, 3121 N. Grand, St. Louis  
Kilker, Donald E., 7231 Winchester Drive, Normandy  
Kimelman, Nathan, V. A. Hospital, Jefferson Barracks  
King, Eustace E., III, 2114 E. Grand Ave., St. Louis  
Kingsland, Robert C., 31 N. Brentwood, Clayton  
Klinkerfuss, George Henry, 340 Bermuda Ave., St. Louis  
Kloecker, Herman J., 9621 Lackland Road, Overland  
Kloepfel, Carl F., Route No. 12, Box 212, Kirkwood  
Koch, Otto W., Metropolitan Bldg., St. Louis  
Koch, Robert E., 171 Linden Ave., Clayton  
Koessel, Arthur W., 640 Missouri Bldg., St. Louis  
Konzelman, John Albert, 6677 Delmar, St. Louis  
Kuritz, Albert B., 6718 Dale Ave., St. Louis  
Lerner, Abe F., 714 Leland Ave., University City  
Leslie, Charles Harold, 209 S. Kirkwood Road, Kirkwood  
Levey, Simon A., 989 Arcade Bldg., St. Louis  
Levin, M. J., 2833 Manderly Drive, Brentwood  
Loving, B. Rush, Ballwin  
Luckey, Horace Leslie, 2816 Sutton Ave., Maplewood  
Luedde, Fullerton W., 316 Metropolitan Bldg., St. Louis  
McCarthy, Thomas D., 3810 Waller Ave., Lemay  
McCullough, Edison W., 817 Dugan St., Jefferson Barracks  
McLean, Royal C., 126 E. Jefferson Ave., Kirkwood  
McNearney, Joseph, 7308 Glades, St. Louis  
McShane, Quentin W., 207 Lister Bldg., St. Louis  
Macdonald, William C., 201 Humboldt Bldg., St. Louis  
Magidson, Joseph, 7554 Wellington Way, Clayton  
Magness, Guy N., 6651 Enright Ave., University City  
Manganaro, Frank J., 336 E. Bodley Ave., Kirkwood  
Marcus, Morris D., University Club Bldg., St. Louis  
Marmor, William A., 607 N. Grand, St. Louis  
May, Benjamin F., 601 Humboldt Bldg., St. Louis  
Meador, James R., 2 South Central, Clayton  
Mendonsa, Elsa L., 504 N. Central Ave., University City  
Miller, James A., 9424 Sterling Pl., Affton  
Monat, Seymour, 5367 Pershing Ave., St. Louis  
Moore, Harry G., 1801 Chouteau Ave., St. Louis  
Moore, William E., 7301 Natural Bridge Road, Normandy  
Morse, Frank L., 204 University Club Bldg., St. Louis  
Nakada, James Robert, 504 Humboldt Bldg., St. Louis  
Nash, W. Hampton, 915 Olive St., St. Louis  
Niederwimer, John, Koch Hospital, Koch North, William R., 17 E. Lockwood, Webster Groves  
Nussbaum, Robert A., 3701 Grandel Square, St. Louis  
Obrock, Louis C., 779 Lemay Ferry Road, St. Louis  
O'Connell, John, 10300 Lackland Road, Overland  
Oetting, Henry K., 7270 Winchester Drive, St. Louis  
Ott, Harold J., 2816 Sutton Ave., Maplewood  
Owens, Bert O., 744 Missouri Bldg., St. Louis  
Paddock, Richard, 6154 Westminster Place, St. Louis  
Park, George M., Box 6, Eureka  
Parman, David R., Wall Bldg., St. Louis  
Pawol, S. E., 2573 Woodson Road, St. Louis  
Petersen, Fenton J., 1005 Big Bend, St. Louis  
Phillips, Hanford, 1117 N. Union Blvd., St. Louis  
Preston, Richard A., V. A. Hospital, Jefferson Barracks  
Prichard, Joseph A., 9019 Tudor Ave., Overland





even after **40,**

## a woman does creative work...

The urge to do creative or constructive work is often rekindled in the woman relieved of menopausal symptoms. Restraints placed on her talents by the nervousness, hot flushes and other manifestations of the climacteric may vanish entirely following the use of "Premarin."

In addition, there is a "plus" in "Premarin" therapy...the gratifying "sense of well-being" so frequently reported by the patient. Oral activity, comparative freedom from side-effects and flexibility of dosage are other advantages associated with this naturally-occurring, conjugated estrogen. "Premarin" is supplied in tablets of four different potencies and in liquid form.



While sodium estrane sulfate is the principal estrogen in "Premarin," other equine estrogens...estradiol, equilin, equilenin, hippulin...are probably also present in varying amounts as water-soluble conjugates.

# "PREMARIN"



ESTROGENIC SUBSTANCES (WATER-SOLUBLE)  
also known as CONJUGATED ESTROGENS (equine)

**Ayerst, McKenna & Harrison Limited** 22 East 40th Street, New York 16, New York  
4904

Proud, G. O'Neil, 7414 Melrose Ave., St. Louis  
 Reese, A. Victor, 120 E. Lockwood, Webster Groves  
 Reilly, Pierce J., 6125 Bartmer Ave., St. Louis  
 Reinhard, Edward Humphrey, 662 Elmwood, Webster Groves  
 Richtarsic, Stephen R., 7510 Delmar Blvd., St. Louis  
 Roberts, John R., 8649 Rosalie Ave., Brentwood  
 Robinson, Edith C., No. 2 Briar Oak, St. Louis  
 Robinson, Ralph D., Address Unknown  
 Rogers, C. H., 914 Arcade Bldg., St. Louis  
 Rogers, John Asa, 527 Warren Ave., University City  
 Rosenberg, Henry E., 1467 N. Union, St. Louis  
 Rosenberger, Charles F., 7745 Olive St., St. Louis  
 Roufa, Joseph F., 425 De Baliviere Ave., St. Louis  
 Rupe, Wayne A., 453 N. Taylor Ave., St. Louis  
 Rutledge, Paul E., 411 N. Kirkwood Road, Kirkwood  
 Ryan, John J., 28 Ridgetop Drive, Clayton  
 Salisbury, William J., Vigus  
 Sanders, Clifford E., 7050 Dale Ave., Richmond Heights  
 Schattlyn, John Martyn, Th., 505 Humboldt Bldg., St. Louis  
 Scheele, M. H., 597 Purdue, University City  
 Schluer, Elmer P., 517 Beaumont Bldg., St. Louis  
 Schmidt, Edmund M., 6704 W. Florissant, St. Louis  
 Schultz, Samuel, 2813a Watson Road, St. Louis  
 Schwartz, Alfred S., 462 N. Taylor, St. Louis  
 Schwartzman, Bernard, 462 N. Taylor, St. Louis  
 Scott, Henry F., Ballwin  
 Seabaugh, Otis Dewey, 105 W. Lockwood Ave., Webster Groves  
 Selle, Harold C., 1034 Packard St., Ferguson  
 Sharp, Cecil A. Z., 651 Brentwood Blvd., Clayton  
 Shaver, Nellie A., 2739 N. Grand, St. Louis

Shepherd, Charles Thomas, No. 10 Covington Meadows, Clayton  
 Silverberg, Charles, 860 N. McKnight Road, St. Louis  
 Skilling, David M., Jr., 415 Lister Bldg., St. Louis  
 Skinner, John Spalding, 7379 Pershing Blvd., University City  
 Smit, Herbert M., 5285 Washington Blvd., St. Louis  
 Smith, William Alexander, 111a W. Lockwood Ave., Webster Groves  
 Sommer, Conrad S., 4500 Olive St., St. Louis  
 Spitz, Milton A., 462 N. Taylor, St. Louis  
 Spitzer, Ernest, 6637 Kingsbury Blvd., University City  
 Spooneman, Marlin C., 3024 Hatherly Drive, St. Louis  
 Staehle, Melvin E., 7124 Natural Bridge Road, St. Louis  
 Stein, Harry J., 6917 W. Florissant Ave., St. Louis  
 Stein, Leon A., 2618 Oregon, St. Louis  
 Steiner, Alexander J., 3938 Flora Bldg., St. Louis  
 Stephens, William A., 204 Pasteur Bldg., St. Louis  
 Sterling, Charles Edward, 2050 North & South Road, St. Louis  
 Sterling, John A., 7266 Manchester Ave., Maplewood  
 Stewart, Francis H., 7161 Delmar Blvd., St. Louis  
 Stocking, Lyman C., 461 Boatmen's Bank Bldg., St. Louis  
 Stoelze, Joseph D., 104 W. Adams Ave., Kirkwood  
 Straucher, Gilbert W., 337 W. Lockwood, Webster Groves  
 Stuebner, Roland W., 5 Indian Hill, Clayton  
 Sutter, Richard A., 7215 Greenway, St. Louis  
 Tashna, Sigmund, 4500 Olive St., St. Louis  
 Taussig, Joseph B., 316 Lister Bldg., St. Louis  
 Telber, Frederick W., 3201 Washington Ave., St. Louis  
 Tenaglia, Eutimio D., 706 Missouri Theatre Bldg., St. Louis  
 Thatcher, J. O. M., 756 "J" Ave., Coronado, Calif.  
 Tiernon, Luke B., 3718 Jennings Road, St. Louis

## ST. LOUIS MEDICAL SOCIETY

(St. Louis)

Abel, Oliver, Jr., 4952 Maryland  
 Abell, Walter E., 2253 So. 39th St.  
 Abrams, Hyman S., 241 E. 6th Ave., Tallahassee, Fla.  
 Agress, Harry, 1045 Missouri Bldg.  
 Ainsworth, H. Smith, 209 Burns Bldg., Colorado Springs, Colo.  
 Aitken, Louis F., 520 Beaumont Bldg.  
 Aker, Cecil G., 5140 Proctor Ave., Oakland 18, Calif.  
 Albrecht, Franklin H., 607 N. Grand  
 Alden, Arthur M., 537 Frisco Bldg.  
 Alexander, Harry L., Barnes Hospital  
 Alford, Leland B., 607 N. Grand  
 Allen, Duff S., 415 Lister Bldg.  
 Allen, Henry C., 634 N. Grand  
 Allen, Hollis N., 816 Missouri Bldg.  
 Allen, Melvin A., 7561, Bryon Place  
 Allen, Willard M., St. Louis Maternity Hosp.  
 Althaus, Carl, 3248 Lafayette Ave.  
 Althaus, Carl Jacob, No. 2 Town Country, City of Ladue  
 Altheide, J. Paul, 714 University Club Bldg.  
 Alvis, Bennett Y., 900 Carleton Bldg.  
 Alvis, Edmund B., 903 Carleton Bldg.  
 Ambrose, Olney A., 4660 Maryland  
 Anderson, DeWayne C., 902 So. Side National Bank Bldg.  
 Andrews, Raleigh K., 3720 Washington Blvd.  
 Anschuetz, Robert R., 600 So. Kingshighway  
 Anstey, George, 1222 Missouri Bldg.  
 Arbuckle, Millard F., 505 Humboldt Bldg.  
 Arneson, Axel N., 4952 Maryland Ave.  
 Arney, William G., 1420 Grattan Ave.  
 Arnold, Eugene L., 1449 McLaran Ave.  
 Aronberg, Lawrence M., 4166 Lindell  
 Arthur, John M., III, Spring Grove Hospital, Catonsville, Md.  
 Artz, Franz, 4952 Maryland

Atherton, Herbert R., National Stock Yards, Ill.  
 Atkinson, William J., Jr., 1515 Lafayette Ave.  
 AufderHeide, G. Russell, 4570 Fair Ave.  
 Ayars, Treton R., 817 University Club Bldg.  
 Bagby, James W., 414 Beaumont Bldg.  
 Bailey, Frank A., 3108 S. Grand Blvd.  
 Bailey, Fred W., 5233 Delett Ave., South, St. Petersburg, Fla.  
 Baker, Cecil H., 3555 Sidney St.  
 Baker, William M., 3133 Hawthorne Blvd.  
 Baldree, Charles E., 735 Beaumont Bldg.  
 Baldrige, Max, 2143 Alfred Ave.  
 Baltrisch, Oscar W., c/o General Delivery, Billings, Mont.  
 Banet, Samuel R., 7301 St. Charles Rock Rd.  
 Bardenheier, J. Phil, 602 Wall Bldg.  
 Barker, Jesse W., 1504 S. Jefferson Ave.  
 Baron, William, 2601 S. Jefferson  
 Barrett, Ralph M. S., 404 S. Hanley Rd.  
 Bartels, Leo, 205 Frisco Bldg.  
 Bartlett, Robert W., 929 University Club Bldg.  
 Bartlett, Willard, 929 University Club Bldg.  
 Bartlett, Willard, Jr., 164 N. Meramec Ave., Clayton  
 Bartnick, Mitchel L., 4065 Alma Ave.  
 Barton, Harry R., Address Unknown  
 Barton, Paul F., 717½ W. Washington, Champaign, Ill.  
 Bassett, Robert B., 5427 Delmar Blvd.  
 Bates, George C., Jefferson City  
 Batts, Jett McCormick, 402 S. Side National Bank Bldg.  
 Bauer, Joseph A., 3720 Washington Blvd.  
 Bauer, Louis, 2646 Gravois  
 Bauman, Charles M., 1206 Chemical Bldg.  
 Baumgarten, Walter, Jr., 3720 Washington Blvd.

Townsend, James A., Eureka  
 Townsend, Vincent F., 3101 Sutton Ave., Maplewood  
 Townsend, William H., 7398 Maple Ave., Maplewood  
 Tremain, E. E., 2901 Big Bend Road, Maplewood  
 Tureen, Louis Leon, 440 N. Taylor, St. Louis  
 Vitale, Antonio S., 3861 St. Louis Ave., St. Louis  
 Vitale, Nicholas S., 7276 Ravina, Normandy Branch, St. Louis  
 Vizgird, J. J., 2807 N. Grand Blvd., St. Louis  
 Vollmar, Clarence J., 55a W. Big Bend Road, Webster Groves  
 Votaw, Robert E., 10 Warson Terrace, Clayton  
 Wachter, Harry E., 203 Beaumont Bldg., St. Louis  
 Wall, Albert, 5322 Helen Ave., St. Louis  
 Walther, Roy A., Jr., 2438 Woodson Road, Overland  
 Walther, Roy A., 8901 Shawnee Lane, Overland  
 Waters, E. B., 126 E. Jefferson Ave., Kirkwood  
 Weber, William K., 3938 Canterbury Drive, Normandy  
 Weisman, Sol, 4500 Olive St., St. Louis  
 Weitman, Maximilian, 3530a Arsenal, St. Louis  
 Werth, Duncan Scott, 124 E. Adams, Kirkwood  
 Westrup, Arthur W., 204 E. Big Bend Road, Webster Groves  
 Westrup, Ellsworth A., 219 E. Jackson Road, Webster Groves  
 Whitener, Paul Rowland, 8923 Midland, St. Louis  
 Williamson, O. E., 6336 Clayton Road, St. Louis  
 Wolff, Charles, 1418 Franklin St., St. Louis  
 Wurzer, Arnold Henry, 8904 St. Charles Rock Road, St. Louis  
 Wyatt, Lois C., 124 E. Adams Ave., Kirkwood  
 Yost, Walter B., 6635 Delmar Blvd., University City  
 Young, John S., 2800 N. Taylor Ave., St. Louis  
 Zeidler, Walter A., 2554 Hord Ave., Jennings

Beam, Sim F., 52 Middlesex Drive, Brentwood  
 Beare, J. Byron, 401 Beaumont Bldg.  
 Beasley, Clifton H., 7124 Rhodes Ave.  
 Beasley, L. Kenneth, 302 Wall Bldg.  
 Becke, William G., 912 Beaumont Bldg.  
 Becker, Edward J., 205 Frisco Bldg.  
 Becker, George H., 921 Missouri Bldg.  
 Becker, George W., 3606 Gravois  
 Beckett, Edmund S., 5841 Maryland, Chicago 37, Ill.  
 Beckham, Genevieve S., 4950 Walsh  
 Beisbarth, Albert, 3606 Gravois  
 Beisbarth, Carl C., Beaumont Bldg.  
 Bell, Robert M., 640 Beaumont Bldg.  
 Benincasa, Anthony V., 6153a Natural Bridge Rd.  
 Benjamin, Durand, 7430 Virginia Ave.  
 Berard, Louis N., 984 Arcade Bldg.  
 Berg, Ralph, 3203 S. Grand  
 Berger, Edward J., 440 N. Taylor  
 Bergman, Hugo F., 203 Beaumont Bldg.  
 Bergner, Grace E., 114 N. Taylor Ave.  
 Berman, Joseph P., 7452 University Drive  
 Berman, William, 462 N. Taylor Ave.  
 Bersche, Bertram L., 3159a S. Grand  
 Bess, George C., 5203 Chippewa  
 Bettonville, Paul J., Jr., 1236 Arch Terrace  
 Bieri, Earl J., 514 Metropolitan Bldg.  
 Bierman, Max John, 3858 Marietta, Normandy  
 Bilotta, Laurence A., 2739 N. Grand  
 Bilsky, Nathan, 2739 N. Grand  
 Bindbeutel, Arthur H., 5203 Chippewa  
 Binsall, Thomas C., 4660 Maryland  
 Birnsall, Louis J., 1232 Missouri Bldg.  
 Bisne, Daniel, 4500 Olive St.  
 Black, James M., 705 N. Kingshighway  
 Black, William D., 6655 Kingsbury Place  
 Blair, Vilray P., 400 Metropolitan Bldg.  
 Bock, L. H., 1504 S. Grand Blvd.  
 Bockelman, Clifford H., 2615 Brentwood Blvd.





**"FOR ME  
ALWAYS"**

## Because **DARICRAFT**

1. is **EASILY DIGESTED**
2. has 400 U. S. P. Units of **VITAMIN D** per pint of evaporated milk.
3. has **HIGH FOOD VALUE**
4. has an **IMPROVED FLAVOR**
5. is **HOMOGENIZED**
6. is **STERILIZED**
7. is from **INSPECTED HERDS**
8. is **SPECIALLY PROCESSED**
9. is **UNIFORM**
10. will **WHIP QUICKLY**

**PRESCRIBED BY MANY DOCTORS**  
... You also may want to utilize Daricraft as a solution to your infant feeding problems, as well as in special diets for convalescents.

**PRODUCERS CREAMERY CO., SPRINGFIELD, MISSOURI**



**From where I sit  
by Joe Marsh**

## **To Dunk or Not To Dunk?**

*Dunking doughnuts is Sober Hopkins' favorite morning pastime . . . and for a long time now Ma Hopkins has been trying hard to break him of the habit. She feels it sets a bad example for the children.*

So one morning she puts a real heavy frosting of chocolate on the doughnuts . . . figuring that will surely stop him. Sober thinks it over for a little while and then: Dunk! Taste? Smile!! And Sober compliments the missus on the lovely mocha flavor!

*I guess there'll always be two schools of thought: to dunk or not to dunk. But from where I sit, it's a matter of personal choice and taste—like some folks prefer beer to cider, ale to beer. And the less we criticize those differences of taste, the better.*

In fact, Ma Hopkins got so curious about the flavor of chocolate-covered doughnuts dunked in coffee, that she tried it herself. Now—you've guessed it—she's a daily dunker, too!

*Joe Marsh*

- Boedeker, Roy V., 219 Lister Bldg.  
Boemer, Irving H., 517 Beaumont Bldg.  
Boemer, Lilburn C., 517 Beaumont Bldg.  
Bohannon, Burton, 2602 S. Grand  
Bohne, William R., 4500 Olive St.  
Bohrer, Harry C., 315 University Club Bldg.  
Boldizar, Albert G., 1022 Beaumont Bldg.  
Bondurant, Bryce H., 5514 Clemens Ave.  
Bosse, Edwin H., 336 University Club Bldg.  
Bowden, Edward H., 16 Sussex Drive  
Bowerman, Harold H., 819 University Club Bldg.  
Bowersox, Warren A., 4515 Lindell  
Boyd, Arthur M., 1703 S. Grand  
Bradley, Arthur H., 4260 Lindell Blvd.  
Bradley, Frank R., 600 S. Kingshighway  
Bradley, John Martin, 4954 Highland Ave.  
Bremser, Harry L., 4266 Manchester  
Brennan, John A., State Hospital No. 4, Farmington  
Brennan, Robert V., 1111 Blaine Ave., Port Townsend, Wash.  
Britt, Robert E., 1004 Missouri Theatre Bldg.  
Brockelmann, Emmy M. Ross, 1918 E. Grand Blvd.  
Brockelmann, Erich, 719 Metropolitan Bldg.  
Broder, William H., 1225 Sidney St.  
Bromberg, Leon, 542 Missouri Bldg.  
Brookes, Henry Spence, Jr., 905 University Club Bldg.  
Brookes, Robert D., 1652 S. Grand  
Brooks, Arthur C., 60 Kingsbury Place  
Broun, Goronwy O., 1325 S. Grand  
Brown, Arthur C. F., 1202 Woodland Drive, Richmond Heights  
Brown, Clyde O., 502 Beaumont Bldg.  
Brown, E. Eugene, 419 Wall Bldg.  
Brown, James Barrett, 400 Metropolitan Bldg.  
Brown, James M., 38 Kingsbury Place  
Brown, Seymour, 7533 Gannon Ave.  
Bryan, James H., 330 Beaumont Bldg.  
Bryan, William T. K., 418 Beaumont Bldg.  
Bublis, Mary D., 1420 Grattan St.  
Bublis, Norbert J., 4349 Forest Park Blvd.  
Buddy, Edward P., 409 University Club Bldg.  
Buhman, Rudolph, 503 Humboldt Bldg.  
Bulger, Harold A., 600 S. Kingshighway Blvd.  
Burford, Cyrus E., 958 Arcade Bldg.  
Burford, E. Humber, 958 Arcade Bldg.  
Burns, Francis J., 4660 Maryland  
Burns, Stanley S., 823 Missouri Bldg.  
Burst, Emil Andrew, 1901 Cherokee St.  
Busch, Anthony K., 5300 Arsenal St.  
Busse, Ewald W., University of Colorado School of Medicine, Denver, Colo.  
Butts, James D., 6150 Oakland Ave.  
Byars, Louis T., 400 Metropolitan Bldg.  
Byrns, Robert E., 3804 N. Grand  
Cadwell, Paul M., 1420 Grattan St.  
Calkins, Dreavan, 2301 N. Kingshighway  
Callahan, William P., Jr., 8 Lakeside Drive, Wichita, Kan.  
Cameron, Solon, 720 Metropolitan Bldg.  
Campbell, Cecil S., 952 Arcade Bldg.  
Cannon, Edward M., 714 University Club Bldg.  
Cappel, Powel B., 3284 Ivanhoe  
Caravelli, Anthony F., 1106 Missouri Bldg.  
Carney, Joseph E., Jr., 525 Frisco Bldg.  
Carr, Archie D., 215 Beaumont Bldg.  
Carrier, John A., 9617 Gravois Road  
Carroll, George A., 607 N. Grand  
Carroll, Grayson, 609 Humboldt Bldg.  
Carter, William W., 16 Carswold Drive, Clayton  
Casey, Edwin J., 425 Metropolitan Bldg.  
Cason, Elbert H., 5206 Jamieson Ave.  
Cassel, William J., Jr., 4373 West Pine  
Cassidy, Charles A., 604 Third St., Monti Vista, Colo.  
Cassidy, Leslie D., 4952 Maryland  
Catanzaro, Anthony F., 3411 Leola Ave.  
Cavender, Savino W., Staff College, Norfolk 11, Va.  
Chapman, Arthur H., 600 S. Kingshighway  
Charles, Benjamin H., 912 Beaumont Bldg.  
Charles, Cecil M., 1027 Beaumont Bldg.  
Charles, Joseph W., 3664 Washington Blvd.  
Charnas, Raymond M., 216 S. Kingshighway  
Chopin, George F., 8548 Church Road  
Clapciak, Stanley J., 1901 Madison  
Clancy, James F., 424 University Club Bldg.  
Claridge, Ralph A., 5018a Winona Ave.  
Clark, Clarence L., 421 N. 22nd St., Duluth, Minn.  
Clark, James Frederick, 864 Hamilton Ave.  
Cleary, Frank, 1935 Park Ave.  
Cleveland, Andrew H., 419 Carrswold Drive  
Cleveland, Horace F., 1325 Summerset Place, Long Beach 7, Calif.  
Clithero, William Harvey, 906 Carleton  
Coates, Thomas A., 4922 Hampton Ave.  
Coffin, Ernest L., 275 N. Union Blvd.  
Cohen, Frank, 622 Missouri Bldg.  
Cohen, Louis, 4500 Olive St.  
Coller, Frederick C., 5945 Coronado Ave.  
Connor, John J., 433 Metropolitan Bldg.  
Conrad, Adolph H., 7275 Greenway St., Clayton  
Conrad, Adolph H., Jr., 512 Beaumont Bldg.  
Conrad, Marshall B., 20 S. Gore, Webster Groves  
Conway, Francis, 1259 N. Kingshighway  
Cook, Arnold A., 1515 Lafayette  
Cook, James J., 5536 Robin Ave.  
Cook, Jerome E., 603 Metropolitan Bldg.  
Cook, Malcolm M., 3520 Chippewa St.  
Cook, Ralph L., 7135 Kingsbury, University City  
Cook, Robert J., 8529 Douglas Ave., Brentwood  
Cooper, Henry T., 1115 Paul Brown Bldg.  
Cooper, Raymond George, E. I. du Pont de Nemours & Co., Penns Grove, N. J.  
Copher, Glover H., 5281 Westminster Place  
Cordonnier, Justin, 3720 Washington Blvd.  
Cornell, John C., 5005a Gravois Ave.  
Correnti, Nicholas A., 1311 Kraft  
Cory, Harriet Stevens, 6157 Pershing Ave.  
Costello, Cyril J., 1515 Lafayette  
Costello, Joseph P., 4952 Maryland  
Costello, Joseph P., Jr., 30 Arundel Place  
Costen, James B., 722 Beaumont Bldg.  
Coughlin, Bertrand D., 323 Metropolitan Bldg.  
Creane, John C., 2504 N. 14th St.  
Crego, Clarence H., Jr., 204 Humboldt Bldg.  
Crider, Russell J., c/o Dr. Ben Neubeiser, St. Charles  
Crites, John L., 630 S. Kingshighway  
Cron, Heinz E., 558 15th Ave., San Francisco, Calif.  
Cross, Glen O., 645 Blanken Ave., San Francisco, Calif.  
Crossen, Harry S., 904 University Club Bldg.  
Crossen, Robert J., 909 University Club Bldg.  
Crossman, Robert Wesley, 1509 Holly Drive, Webster Groves  
Cummings, James H., 444 N. Euclid  
Cutler, Harold M., 1018 Beaumont Bldg.  
Cutler, Harry, 234 University Club Bldg.  
Daake, John W., 3606 Gravois  
Dahms, Gustave, 1452 S. Grand  
Dalton, Arthur R., 207 Lister Bldg.  
Daman, George A., 3325 S. Grand  
Danis, Peter G., 634 N. Grand  
Davie, Joseph, 406 Frisco Bldg.  
Davis, Edgar W., 3805a S. Broadway  
Davis, Frank L., 620 University Club Bldg.  
Davis, Frank L., Jr., 930 Elmonte Lane  
Davis, Martin W., 408 Humboldt Bldg.  
Davis, Myron Woodward, 718 Beaumont Bldg.  
Davis, Thomas M., 2424 N. Grand  
Day, Anthony B., 411 Beaumont Bldg.  
Deakin, Rogers, 723 University Club Bldg.  
Dean, Lee Wallace, Jr., 3720 Washington Blvd.  
Demko, Frank, 1321 S. Broadway  
Demko, William, 3450 Gravois Ave.  
Denk, Albert A., 7216 Natural Bridge  
DePew, Heber B., 1446 S. Grand  
Deppe, Arthur H., 835 University Club Bldg.  
Deutch, Max, 1206 Missouri Bldg.  
Devereux, James A., 3631 Mount Vernon Road, Wichita, Kan.  
Devine, John B., 607 Wall Bldg.  
Dickson, James A., 5883 Julian Ave.  
Diehr, Alvin H., 845 Missouri Bldg.  
DiLeo, Renato W., 3616 Russell Blvd.  
Dmvtryk, Eugene T., 518 University Club Bldg.  
Dobbs, Otto R., 723 Seminary, Green Castle, Ind.  
Donnell, George N., 4404 Arcola, North Hollywood, Calif.  
Dorsett, E. Lee, 729 Missouri Bldg.  
Doubek, John C., 2767 Gravois Ave.  
Doyle, Charles R., 734 Missouri Bldg.  
Doyle, Raymond E., 3102a S. Grand  
Drace, Charles C., 3702 Gravois  
Drace, Charles C., Jr., 19 E. Lockwood  
Drake, Truman G., 114 N. Taylor  
Drews, Leslie C., 516 Metropolitan Bldg.  
Drey, Norman W., 607 N. Grand  
Dripps, Roy C., 7702 Ivory Ave.  
Drum, Clarence G., 1927a N. Union  
Duden, Charles W., 1011 Beaumont Bldg.  
Duemler, John H., 1504 S. Grand  
Dugan, Lawrence J., 2816 Sutton Ave., Maplewood  
Dulick, Michael, 2319 Brentwood  
Dunn, Edward H., 1611 Hunter Ave., Richmond Heights  
Dworkin, Saul, 1657 South Grand  
Dyer, Dallas J., 4323 Bates Ave.  
Eades, Dee W., No. 12 Kingsbury Place  
Earp, Ralph K., 912 Beaumont Bldg.  
Eber, Carl T., 1006 Carleton Bldg.  
Echterhoff, Harry R., 945 Missouri Bldg.  
Eck, Birkle, 4959 Northland Ave.  
Eck, Peter A., 4959 Northland Ave.  
Eckert, Charles L., 600 S. Kingshighway Blvd.  
Eckert, Clarence T., 601 Humboldt Bldg.  
Ecklund, Archibald M., U. S. Naval Hospital, Mare Island, Calif.  
Edele, Eugene Harry, 4971 Chippewa  
Edgerton, Winfield D., 5841 Maryland Ave., Chicago, Ill.  
Edwards, Edwin D., 4155 Magnolia  
Edwards, Joseph C., 1018 Beaumont Bldg.  
Egley, Loren Edward, 1116 Missouri Bldg.  
Ehlers, Charles W., 752 Lemay Ferry Road  
Ehresmann, Joseph J., 339 Pine St., Carrollton, Ill.  
Eidelman, Jack, 462 N. Taylor  
Eidmann, Walter P., 3146 Morganford Rd.  
Eigel, Edwin G., 3211 S. Grand  
Eimer, Charles E., 462 N. Taylor  
Eisele, Matthew B., 3806 Caseyville Ave., East St. Louis, Ill.  
Eisele, Vincent G., 1755 S. Grand  
Eiseman, Ben, 7139 Waterman Ave.  
Eisenstein, Albert B., 8706 Florence Ave.  
Elliessiek, Dorothy M., St. Louis Training School, Baden Station  
Elman, Robert, 600 S. Kingshighway Blvd.  
Elmer, Warren P., 618 University Club Bldg.  
Elz, Julius T., 3606 Gravois  
Emmert, Fred V., 713 Metropolitan Bldg.  
Engleman, Reinhold, Fitzsimmons General Hospital, Denver 8, Colo.  
Engman, Martin F., 601 Beaumont Bldg.  
Engman, Martin F., Jr., 601 Beaumont Bldg.  
Epp, George J., 3807 Bowen St.  
Erlanger, Herman, 4952 Maryland  
Erlanger, Joseph, 4580 Scott Ave.  
Ernst, Edwin C., 100 Beaumont Bldg.  
Ernst, Edwin C., Jr., Mayo Clinic, Rochester, Minn.  
Ernst, Roland P., Topeka A. A. B., Topeka, Kansas  
Eskeles, Irwin H., 2301 S. Kingshighway  
Esslinger, Arthur T., 203 Beaumont Bldg.  
Eto, Jackson, 634 N. Grand Blvd.  
Eversoll, Norton John, 4129 Washington Blvd.  
Eyermann, Charles H., 1102 Missouri Bldg.  
Falk, Oswald P. J., 3 Southmoor Drive, Clayton  
Farley, William M., 3108 S. Grand  
Farrar, John T., 8 Edgewood Road  
Farrell, Robert J., 624 N. Union  
Farris, William Walker, 3505 N. Grand  
Feinstein, Leon A., 314 Chemical Bldg.  
Feldman, David, 601 Humboldt Bldg.  
Feller, Harold H., 2807 N. Grand  
Felthauer, Carl M., 51 Topton Way, Clayton  
Ferrara, John Pierre, 7307 Natural Bridge  
Ferris, David P., 1000 Carleton Bldg.  
Ferris, Joseph L., 4065 S. Grand  
Fessenden, Ersel M., 4960 Laclede Ave.  
Fineberg, Maxwell, 607 N. Grand  
Finnegan, Frank R., 412 Humboldt Bldg.  
Finnegan, Joseph V., 415 Beaumont Bldg.  
Fischer, Walter, 912 Beaumont Bldg.  
Fischer, Erich, 10 Pasteur Bldg.  
Fish, Virgil O., 780 Yale Ave., University City  
Fisher, Arthur O., 816 Beaumont Bldg.  
Fitzgerald, Leo P., 7219 Cornell Ave., University City



Flader, Otto F., 4030a Chouteau Ave.  
Flanary, David L., 733 Encanto Drive,  
S. E., Phoenix, Ariz.  
Flance, Israel J., 6316 Waterman Ave.  
Flavay, David B., 401 Humboldt Bldg.  
Fleishman, Alfred, 462 N. Taylor  
Fletcher, Paul F., 517 Missouri Bldg.  
Flotte, Bernard H., 2435 N. Grand  
Flynn, George T., Jr., 6445 Vermont Ave.  
Flynn, John T., 1715 S. 39th St.  
Flynn, Joseph E., 3427 Washington  
Ford, Lee T., Jr., 8508 Portridge Ave.  
Ford, William T., 1747 N. 59th St., Phil-  
adelphia, Pa.  
Forsen, James A., 401 Wall Bldg.  
Forster, Armand C., 1504 S. Grand Blvd.  
Forti, John J., 4703 Carter Ave.  
Foster, Howard M., 5059a St. Louis Ave.  
Foster, Leon, 634 N. Grand Blvd.  
Fox, Leon J., 211 Pasteur Bldg.  
Fox, Robert E., 737 Missouri Bldg.  
Frank, Adolph M., 3701 Grandel Square  
Frankel, Sol Irwin, 2621 S. Jefferson Ave.  
Frankenthal, Maurice A., 200 Lister Bldg.  
Franklin, Max S., 727 Missouri Bldg.  
Freedman, Harold, 1106 Missouri Bldg.  
Freedman, Ruth S., 323 Clara Ave.  
Freimuth, L. E., 217 University Club Bldg.  
Frerking, Herbert W., 724 Clara Ave.  
Freund, Newton M., 4605 Lindell Blvd.  
Freund, Samuel J., 6053 Waterman  
Friedman, Bernard, Robert Koch Hos-  
pital, Koch  
Fries, Armand D., 974 Arcade Bldg.  
Fries, William A., 1544 S. Broadway  
Fryer, Minot P., 400 Metropolitan Bldg.  
Funsch, Edwin Clarence, 4101a Laclede  
Ave.  
Funsch, Robert E., Boston Children's Hos-  
pital, Boston, Mass.  
Furlow, Leonard T., 530 Beaumont Bldg.  
Gafney, George Thomas, 533 Missouri  
Bldg.  
Gallagher, John F., 313 Wall Bldg.  
Gallagher, Joseph C., 227 Superior St.,  
Rossford, Ohio  
Gallagher, William J., 1131 Missouri Bldg.  
Gans, Frederick A., 69 Atherton Ave.,  
Pittsburg, Calif.  
Gansloser, Maximilian W., 3624 Arsenal  
St.  
Gansloser, Wilbert M., 6376 Clayton Road,  
Clayton  
Garvin, Leo V., 1424 California Ave.  
Gauen, George Otto, 436 University Club  
Bldg.  
Gay, Lee Pettit, 453 N. Taylor  
Gerst, Aloysius C., 1435 McLaren Ave.  
Gerwitz, Bernard W., 816 Metropolitan  
Bldg.  
Gettinger, Andrew J., 2743 N. Grand  
Gettys, Henry B., 4440 Lindell  
Gibson, Helen F., Carleton Bldg.  
Gilbert, Robert L., 1707 Main St., La-  
Crosse, Wis.  
Gildea, Edwin F., 640 S. Kingshighway  
Gildea, Margaret C. L., 4500 W. Pine  
Gissy, Charles J., 617 Metropolitan Bldg.  
Glaser, Martin J., 420 Mississippi Valley  
Trust Bldg.  
Glassberg, Bertrand Y., 5850 Waterman  
Ave.  
Glaze, Kenneth F., 912 Beaumont Bldg.  
Glenn, Joseph E., 958 Arcade Bldg.  
Glennon, William P., 634 University Club  
Bldg.  
Glick, Harry N., 1504 S. Grand  
Godfrey, George B., 5251 Natural Bridge  
Road  
Godfroy, B. M., 106½ E. Front St., Trave-  
rse City, Mich.  
Goebel, Joan M., 4659 Magnolia Ave.  
Goerger, Verne F., 5352 Devonshire Ave.  
Goetsch, Anne T., 38 Vincente Ave.,  
Berkeley, Calif.  
Goldenson, Max J., 433 Metropolitan Bldg.  
Goldman, Alfred, 1215 Missouri Bldg.  
Goldman, Melvin L., 600 S. Kingshighway  
Goldwasser, Herbert V., 1033 Missouri  
Bldg.  
Gorla, Wayne O., 2739 N. Grand  
Gottlieb, Leo, University Club Bldg.  
Gottschalk, Helen C., 8956 S. Aberdeen,  
Chicago 20, Ill.  
Gradwohl, Rutherford B. H., 3514 Lucas  
Ave.  
Graham, Evarts A., Washington Univer-  
sity Medical School  
Graham, John G., Jr., 700 Seward, De-  
troit, Mich.  
Graneto, Joseph A., 5521 S. Broadway  
Grant, Samuel B., 114 N. Taylor Ave.

Graul, Elmer G., 2838 S. Grand  
Graul, Walter P., 3400 Spruce St., Phila-  
delphia 4, Pa.  
Graves, William W., 1402 S. Grand  
Gray, Samuel H., 216 S. Kingshighway  
Gray, Walter C., 3209 Brown Road  
Green, John, Jr., 1002 Beaumont Bldg.  
Green, Manuel E., 1144 Missouri Bldg.  
Greene, Maurice L., 501 Missouri Bldg.  
Greiner, Theodore, 7507 Washington  
Grindon, Joseph, Jr., 539 N. Grand  
Grindon, Joseph, Sr., 7029 Westmoreland  
Place  
Grogan, Frank M., 4166 Flora Blvd.  
Gronau, Axel R., 940 Missouri Bldg.  
Gross, Joseph L., 533 Missouri Bldg.  
Grueb, Paul M., 3402a California  
Gruendel, Gerhard E., 201 Lister Bldg.  
Grundmann, William H., 2521a N. Jeffer-  
son  
Guccione, Joseph B., 8515 Colonial Lane  
Guhman, Charles N., 5183 Cabanne Ave.  
Gulick, Charles R., 235 Beaumont Bldg.  
Gum, William R., 2227 S. Broadway  
Gummels, Belmont Bernard, 1116 Mc-  
Causland Ave.  
Gundelach, C. Armin, 825 University Club  
Bldg.  
Gundlach, Arthur, 2202 University St.  
Gunn, Walter T., 5003a Gravois  
Gzell, Ronald, 320 Frisco Bldg.  
Hackmeyer, Rubin, 412 Humboldt Bldg.  
Haffner, Heinz, 3 Lindworth Drive  
Hagebusch, Omer E., 400 Lister Bldg.  
Hager, Victor K., 632 Metropolitan Bldg.  
Haile, Leon C., 4049 Magnolia  
Hall, Andy, Jr., 301 University Club Bldg.  
Hall, Lee A., 6629 Clayton Road, Clay-  
ton  
Hall, Preston C., 4243 Lafayette  
Hall, Robert A., 43 Washington Terrace  
Hall, Willis, 5219 Delmar  
Hamilton, Caldwell K., 1242 Missouri  
Bldg.  
Hamilton, Eugene G., 320 Lister Bldg.  
Hamilton, William P., 24 Gast Place  
Hamlett, William Henry, Address Un-  
known  
Hammond, John J., 835 Missouri Bldg.  
Hampton, Stanley F., 1018 Beaumont  
Bldg.  
Hanford, Charles W., 43 Country Side  
Lane  
Hanford, Wesley W., 601 University Club  
Bldg.  
Hansel, French K., 1222 Missouri Bldg.  
Hanser, S. Albert, 901 Arcade Bldg.  
Hanser, Theodore H., 3701 Grandel Square  
Hara, Masauki, 1515 Lafayette  
Hardesty, John F., 706 Missouri Bldg.  
Hardy, Joseph A., Jr., 4952 Maryland  
Hardy, William F., 501 Humboldt Bldg.  
Harell, Alex, 3665 Connecticut  
Harkins, William B., 218 Beaumont Bldg.  
Harmann, Martin F., 206 Lindell Trust  
Bldg.  
Harris, Charles W., 5298a Page Blvd.  
Harris, Downey L., 706 Metropolitan Bldg.  
Harris, Irwin J., 7427 Bland Drive  
Harris, Solon P., 6826 Natural Bridge  
Harrison, Lee B., 601 University Club  
Bldg.  
Hartmann, Alexis F., 500 S. Kingshighway  
Hartnett, Dalton C., 6420 Clayton Road  
Hartnett, Leo J., 517 Missouri Bldg.  
Hartwig, John Adam, 2807 N. Grand  
Hasl, Robert F., c/o F. P. O., San Fran-  
cisco, Calif.  
Hassett, Henry A., 618 University Club  
Bldg.  
Hawker, William D., 16 Hampton Village  
Plaza  
Hayden, Loyola F., 5899 Delmar Blvd.  
Haynes, Pugh, Jr., 3720 Washington Blvd.  
Head, John Francis, 2415 N. Kingshigh-  
way  
Heid, Lloyd L., 2739 N. Grand  
Heideman, Alvah G., 723 Metropolitan  
Bldg.  
Heidenreich, Harry L., 3750 Gravois Ave.  
Heifetz, Carl J., 7141 Delmar, University  
City  
Heinbecker, Peter, Barnes Hospital  
Heinrichs, Julius C., 306 N. Grand  
Helbing, Harry H., 7546 Ethel Ave.  
Hellrung, Frank J., 8321 N. Broadway  
Henderlite, John W., 408 Lister Bldg.  
Henke, Charles F., 3109a S. Grand  
Hennelly, John Joseph, 6241 Loran Ave.  
Hennerich, Walter E., 5663 Enright Ave.  
Henry, Frank C., 7 Hancock St., Lemay  
Henschel, Eugene V., 6200 Hoffman Ave.

Henske, Andrew C., 318 University Club  
Bldg.  
Herdener, Russell L., 7347 Lindell, Uni-  
versity City  
Herman, Alfred, 440 N. Taylor Ave.  
Herman, Morris, 3701 Grandel Square  
Herrick, Harold C., 220 Metropolitan Bldg.  
Herrmann, Gustav J., Forest Park Hotel  
Hewitt, A. Lee, 8038 Lafon Ave.  
Hewitt, Walter R., 7649 Delmar Blvd.  
Heyer, Oscar C., 7600a S. Broadway  
Hickey, Robert F., 620 Missouri Bldg.  
Hieb, Wilbert E., Marion, S. D.  
Higgins, Clinton K., U. S. Naval Hospital,  
Memphis, Tenn.  
Higgins, Robert F., 2000 S. Broadway  
Hildreth, H. Rommel, 1030 Beaumont  
Bldg.  
Hill, Roland, 130 Fourth Ave., N., St.  
Petersburg, Fla.  
Hillenbrand, H. Melvin, 1402 S. Grand  
Hilliard, John D., Regional Hospital, Fort  
Monmouth, N. J.  
Hines, Arthur A., St. Louis Training  
School, Baden Station  
Hines, Paul, Glenwood Sanatorium, Web-  
ster Groves  
Hirschi, William T., 7730 Cornell Ave.,  
University City  
Hobart, Carl Albert, 3601a Gravois  
Hoefler, Walter H. V., 2602 S. Grand  
Hoffman, Augustin David, 4535 Holly Ave.  
Hofmeister, Rudolph, 3958 S. Grand  
Hofstatter, Leopold, 3903 Olive St.  
Hoke, Wilbur J., 3522 Harris Ave.  
Holdenried, William E., 1907 Mississippi  
Ave.  
Holtgrewe, Frederick W., 1501a Benton St.  
Homan, J. S., 4903 Delmar  
Honich, Nicholas J., 8902 Riverview Blvd.  
Hooss, Albert, 3115 S. Grand  
Hopkins, Thomas A., 4411 Forest Park  
Bldg.  
Horner, John L., 114 N. Taylor  
Horwitz, Irwin B., 504 Metropolitan Bldg.  
Hosto, Leland E., 3723 S. Kingshighway  
Hotz, John W., 715 University Club Bldg.  
Howard, Harvey J., Park Plaza  
Hrdlicka, Victor E., 508 N. Grand  
Huber, Erwin T., 1119 Missouri Bldg.  
Huber, Melvin J., 737 Missouri Bldg.  
Hummel, Anton J., 416 Metropolitan Bldg.  
Hurfurd, Phelps G., 416 Wall Bldg.  
Hutto, A. Herman, 105 Lister Bldg.  
Hutton, Joseph Lewis, 902 S. Side Na-  
tional Bank Bldg.  
Hyland, Robert F., 3901 Park Ave.  
Hyman, Anna, 1420 Grattan St.  
Hyndman, Charles E., 614 Beaumont  
Bldg.  
Inglis, Ewine P., Jr., A. P. O. 710, San  
Francisco, Calif.  
Ittner, George W., Jr., 901 Beaumont  
Bldg.  
Jacob, Rudolph D., U. S. Naval Ordnance  
Plant, Forest Park, Ill.  
Jacobs, Charles C., 2226 Salisbury Ave.  
Jacobs, Frederick A., 4952 Maryland  
Jacobson, Henry, 5585 Waterman Ave.  
James, William M., 1030 Beaumont Bldg.  
Jaudon, Benjamin Y., 46 Glen Road, Web-  
ster Groves  
Jaudon, Joseph C., 46 Glen Road, Webster  
Groves  
Javaux, Everett J., 405 University Club  
Bldg.  
Jean, J. Ted, 4500 West Pine  
Jensen, J. Ernest, 1140 Missouri Bldg.  
Jesger, William, 5647 Delmar Blvd.  
Johnson, Charles H., 4530 Washington  
Bldg.  
Johnson, Mitchell D., 40 N. Florissant  
Road  
Johnson, Warren C., 5400 Arsenal St.  
Johnson, William F., 5610 Huntington,  
Lincoln, Neb.  
Jolly, Benjamin N., 919 N. Taylor  
Jolly, William Hardin, 1105 Gorgas St.,  
Jefferson Barracks  
Jones, Andrew B., 418 Beaumont Bldg.  
Jones, John Grey, 215 Lister Bldg.  
Jones, Otey Sherman, 3616 S. Broadway  
Jones, Richard A., 332 Calvert  
Jones, Vincent L., 645 Missouri Theatre  
Bldg.  
Jones, William E., 310 Lister Bldg.  
Jones, William James, William Beaumont  
General Hospital, El Paso, Tex.  
Jordan, Edward J., 412 Nicholas Bldg.  
Jordan, Walter R., 503 Wall Bldg.  
Jorstad, Louis H., 908 Beaumont Bldg.



- Joseph, Donald J., Enid A. F. B., Enid, Okla.
- Joslyn, Harold L., 515 Wall Bldg.
- Jost, Charles A., 3500 N. Grand
- Jost, William E., 508 N. Grand
- Jostes, Frederick A., 418 Beaumont Bldg.
- Judy, Joseph, 9 a S. Florissant Road
- Jungk, Carl G. W., 2278 S. Jefferson
- Kalish, John T., Robert Koch Hospital, Koch
- Kaminsky, David, Veterans Hospital, Jefferson Barracks
- Kane, Clyde E., 706 Walton Ave.
- Kane, R. Emmet, 1117 N. Grand Ave.
- Kaplan, Albert, 7209 Burrwood Drive
- Karl, Michael M., 912 Beaumont Bldg.
- Karn, Robert B., 2002 S. Broadway
- Kaskie, Clifford R., 307 S. Euclid Ave.
- Katz, Samuel D., 6324 Northwood Ave.
- Keeble, Charles B., 3102 S. Grand Blvd.
- Keffler, Karl L., 1139 Bellevue Blvd.
- Kehoe, John Joseph, 4145 St. Louis Ave.
- Keim, John P., 2730 McNair
- Keller, Joseph M., 416 Metropolitan Bldg.
- Keller, Louis, 6420 Clayton Road
- Kelley, Isaac D., Jr., 3903 Park Ave.
- Kelley, Robert W., 622 Beaumont Bldg.
- Kellogg, Huston G., St. Joseph's Infirmary, Louisville, Ky.
- Kelly, Charles A., 3606 Gravois
- Kelly, R. Emmet, 6335 Waterman
- Kenamore, Bruce, 901 Beaumont Bldg.
- Kendall, Edward A., Jr., 2609 Madison Ave., Granite City, Ill.
- Kennedy, Francis L., 7154 Northmoor Drive
- Kennedy, John L., 1011 Beaumont Bldg.
- Kennedy, Thomas R., 518 University Club Bldg.
- Kerr, David N., 6939 Pershing Ave.
- Kettelkamp, George D., Koch Hospital, Koch
- Key, J. Albert, 4952 Maryland
- Keyes, Edward Lawrence, 4952 Maryland
- Kieffer, Roland Spurlock, 402 Lister Bldg.
- Kieffer, Victor B., 6900 Cornell
- Kienzle, Edward C., 2800a Chippewa
- Kimmel, John W., APO 225, c/o Postmaster, New York, N. Y.
- King, George W., Hdq. 5th Inf. Division, Fort Jackson, S. C.
- King, John V., 671 E. Big Bend Blvd., Webster Groves
- King, Samuel J., 800 Carleton Bldg.
- Kinner, Helmut H., 3014 S. Jefferson Ave.
- Kinsella, Dalton L., Jr., 4404 Lindell Blvd.
- Kinsella, Ralph A., 415 Beaumont Bldg.
- Kirchner, Walter C. G., 811 Metropolitan Bldg.
- Kirkpatrick, Harry E., Box 43, Itasca, Ill.
- Kirstein, Melvin B., 601 Humboldt Bldg.
- Kirtz, Louis P., 4952 Maryland Ave.
- Klaff, Daniel D., 309 Beaumont Bldg.
- Klein, Andrew G., 2959 Milton Blvd.
- Klein, Arnold G., 4663 Magnolia Ave.
- Klein, Bert, 2632 S. Kingshighway Blvd.
- Klein, Harry A., 5074 N. Union
- Kleinschmidt, Clinton, 7624 Maryland
- Klemme, Roland M., 4952 Maryland
- Klenk, Charles L., 420 Metropolitan Bldg.
- Klippel, Allen P., Walnut Park Plaza Hotel, Philadelphia 39, Pa.
- Kloppel, Bernhardt William, 3701 Grandel Square
- Klippel, Edward T., 908 South 7th St.
- Klopper, Victor F., 5203 Chippewa St.
- Knap, Louis G., 39 Marshall Place
- Kneal, Ellsworth, 921 Missouri Bldg.
- Knese, Luke A., 6919 Reder Ave.
- Knight, William A., 8201 North Broadway
- Knight, William A., Jr., 504 Missouri Bldg.
- Knoke, Frederick William, Jr., 211 Hampton Village Medical Center
- Koeb, Roland Anthony, 3430 California Ave.
- Koenig, George H., 435 Clemens Ave., Kirkwood
- Koenig, Karl F., 502 Beaumont Bldg.
- Kohler, Eugene J., 4968a Delmar
- Kohler, Louis H., 5300 Arsenal St.
- Koon, Bernard T., 4755 Morganford Road
- Kopp, Jules H., 108 Lister Bldg.
- Kopp, Leonard J., 3614 Russell Blvd.
- Kotkis, Alexander J., 80 York Drive
- Kotner, Lawrence M., 603 Metropolitan Bldg.
- Kountz, William B., 415 Lister Bldg.
- Kouri, Martin F., 319 Metropolitan Bldg.
- Koutsompas, William V., 1405 S. Broadway
- Kowert, Edward H., 4235 Harris
- Kraft, Edward O., 4519 Jamieson Ave.
- Kramer, Fred, 504 Missouri Bldg.
- Kramer, Scott G., 7158 Manchester Ave.
- Kramolowsky, Helmut H., 984 Arcade Bldg.
- Krause, G. Lynn, 614 Beaumont Bldg.
- Krebs, Frank J. V., 9365 Clayton Road, Clayton
- Krebs, Joseph M., 910 Missouri Theatre Bldg.
- Krebs, Otto St. Clair, 207 Beaumont Bldg.
- Krenning, William G., 4548 Harris
- Kroeger, George B., 8211 Gannon Ave.
- Kubitschek, Paul E., 207 Beaumont Bldg.
- Kuenkel, Victor H., 3608 South Grand
- Kurth, Robert K., 337 W. Lockwood Ave., Webster Groves
- Kurtzeborn, Edwin E., 3526 Washington
- Kurz, Rudolph F., 1148 Pierce Bldg.
- Kuttner, Marianne, 1206 Missouri Bldg.
- Lamb, Harvey D., 1229 Missouri Bldg.
- Landree, James C., 437 University Club Bldg.
- Lane, Clinton W., 440 Beaumont Bldg.
- Langan, William J., Jr., 5803 Plymouth
- Lange, Adolph C., 512 Wall Bldg.
- Langenbach, Alfred M., 6200 Hoffman Ave.
- Lansche, Elmer Arnold, 4885 Natural Bridge Road
- Larimore, Joseph William, 626 Beaumont Bldg.
- Larsen, Kenneth V., 819 University Club Bldg.
- Lassar, Gilbert N., 1045 Missouri Bldg.
- Lawler, Harry James, 1206 Missouri Bldg.
- Lawrence, John V., 4534 West Pine Blvd.
- Lawton, Richard L., No. 7 Hancock Ave.
- Lawton, Thomas P., 4903 Wabada
- Leavy, Charles A., 9054 Clayton Road
- Le Blanc, Leo J., 28 Aberdeen Place
- Lederman, Joseph, 2400 N. Grand Blvd.
- Lee, Elbert J., Jr., 220 N. Fourth St.
- Leidler, Franz, 1430 Carroll St.
- Leighton, William E., 801 Beaumont Bldg.
- Lembeck, Joseph A., 601 University Club Bldg.
- Lemen, Lois E., University Hospital, Columbia
- Lenobel, Milton I., 6053 Waterman
- Levin, Sidney Saul, 440 N. Taylor Ave.
- Levy, Irwin, 4952 Maryland Ave.
- Leydig, Stanley M., 912 Beaumont Bldg.
- Lieb, Otto, 307 Lister Bldg.
- Liese, Grover B., 321 Beaumont Bldg.
- Liggett, Hiram S., 401 Beaumont Bldg.
- Lindeman, Carl H., St. Johns Hospital
- Lipman, Bernard S., Newington Vets. Hospital, Newington, Conn.
- Lippert, Stuart P., 510 S. Kingshighway
- Lippoldt, Charles L., 106 S. Main St., Batesville, Ind.
- Lischer, Carl E., 943 Greely Ave., Webster Groves
- Littmann, Lewis E., 7501 Cromwell Drive, Clayton
- Loeb, Virgil, 309 Beaumont Bldg.
- Loeb, Virgil, Jr., Newington Vets. Hospital, Newington, Conn.
- Loeffel, Ellen S., 635 Beaumont Bldg.
- Lohr, Curtis H., 601 Brentwood
- Londe, Sol, 201 Lister Bldg.
- Loneran, Warren M., 7925 Delmar
- Lonsway, Maurice J., No. 3 Ridgetop, Clayton
- LoPiccolo, Vincent J., 1931 Marconi
- Lottes, James O., 1515 Lafayette
- Loughead, John R., Beaumont Gen. Hospital, El Paso, Texas
- Lowenstein, Paul S., 703 University Club Bldg.
- Lucido, Joseph L., 7490 Hillsdale Drive
- Luedde, Philip S., 316 Metropolitan Bldg.
- Luedde, William H., 311 Metropolitan Bldg.
- Luten, Drew W., 502 Beaumont Bldg.
- Lyman, Edward H., 906 Carlton Bldg.
- Lyman, Harry W., 906 Carleton Bldg.
- Lytle, Garnet C., 2407a N. Broadway
- Lytton, William B., 7507a Oxford Drive, Clayton
- McAdam, Charles R., 525 Frisco Bldg.
- McBratney, Emmett W., 6829 Virginia Ave.
- McCall, Edwin L., 9012 Manchester Road
- McCarroll, Henry R., 3720 Washington
- McCarthy, Eugene F., 5070 Westminster Place
- McCaughan, John Milton, 505 Humboldt Bldg.
- McCulloch, Hugh, 325 N. Euclid Ave.
- McDonald, George H., 5795 Pershing Ave.
- McDonald, George J., Address Unknown
- McDowell, Frank S., 400 Metropolitan Bldg.
- McElroy, Glenn L., Address Unknown
- McElvain, Robert C., 4356 Warne Ave.
- McEwen, John C., O'Reilly V. A. Hospital, Springfield
- McFadden, F. Ross, Audubon, Iowa
- McFadden, James F., 940 Missouri Bldg.
- McFadden, James F., Jr., 4 Ridgemoor Drive, Clayton
- McGennis, Patrick, 5707 McPherson
- McGinnis, Byron J., 3608 S. Grand Blvd.
- McGinnis, William F., 715 Beaumont Med. Bldg.
- McGuire, William A., 2322 N. Kingshighway
- McLaughlin, Robert J., 501 La Salle St., Wausau, Wis.
- McLoon, Mary A., 408 Humboldt Bldg.
- McMahon, Alphonse, 806 Missouri Bldg.
- McMahon, Bernard J., 806 Missouri Bldg.
- McNalley, Frank P., 3720 Washington
- McNamee, Owen J., 7619 Ivory Ave.
- McNamee, William Francis, 7619a Ivory
- McNeal, Lee A., Jr., 919 N. Taylor Ave.
- McSwiney, John G., 5014 Thekla Ave.
- Maas, Hermann, 828 Metropolitan Bldg.
- MacBryde, Cyril M., 830 Beaumont Bldg.
- McDonald, John W., 201 Humboldt Bldg.
- Mackey, John F., Jr., 1325 S. Grand Blvd.
- Macko, Joseph R., 1303 N. Kingshighway Blvd.
- Maenish, James M., 504 Metropolitan Bldg.
- Macon, William L., Jr., 7158 Manchester Blvd.
- Magee, Charles D., 812 Olive St.
- Maizus, Saul Hyman, 5845 Devonshire Ave.
- Malles, Albert C., 819 University Club Bldg.
- Manion, Peter J., 3915 Brannon Ave.
- Mannis, Ben G., 6057 Cates Ave.
- Mansbacher, Kurt, 462 North Taylor Ave.
- Manting, George, 4903 Delmar
- Marbury, Benjamin E., 6322 Fauquier Drive
- Margulis, Abraham A., 601 Humboldt Bldg.
- Marston, Warren G., 607 N. Grand
- Martin, Charles E., 3911 Lee Ave.
- Martin, Charles P., 3093 Lee Ave.
- Martin, Maynard W., 5535 Delmar Blvd.
- Martin, Raymond T., 5203 Chippewa St.
- Martin, Thomas M., 937 Missouri Bldg.
- Mason, Roy E., Frisco Bldg.
- Masie, Edward, 607 N. Grand Blvd.
- Masters, William H., 630 S. Kingshighway
- Mastin, E. Vernon, 930 Beaumont Bldg.
- Mathae, George H., 3167 South Grand
- Matthews, John G., 3707 Watson Road
- Mattis, Robert D., 937 Missouri Theatre Bldg.
- Maugh, Sidney B., 4500 West Pine Blvd.
- Max, Clarence O. C., 220 N. Kingshighway
- Max, Paul F., 701 Beaumont Bldg.
- Maxwell, Richard W., 6645 University Drive
- Mayer, Leo L., 1045 Missouri Bldg.
- Medler, Francis J., 4118 W. Florissant
- Mehan, George T., 414 Wall Bldg.
- Meinberg, William H., Jr., 329 Frisco Bldg.
- Meiners, Edwin P., 6651 Enright
- Meinhardt, Victor J., Lindell Trust Bldg.
- Meisenbach, A. Edward, 32 Marina Bldg.
- Melgaard, S. Ross, 3645 Park Ave., Minneapolis, Minn.
- Melick, William F., 614 Missouri Bldg.
- Mellies, Eugene C., 7518 Forest View Drive
- Mellies, George A., 314 Lindell Trust Bldg.
- Mendonsa, Lawrence E., 322 University Club Bldg.
- Menown, Roland R., 5330 Geraldine Ave.
- Meredit, Joseph J., 8603 Wade Park, Cleveland 6, Ohio
- Merenda, Sam J., 601 Brentwood Blvd.
- Merklin, Anton L., 3507 Potomac St.
- Merritt, Burch A., 340 Bermuda Ave.
- Merz, Jean J., 6005 Bishops Place
- Metz, Charles O., 3102a S. Grand
- Meyer, Alphonse H., Jr., Albany Hospital, Albany, N. Y.
- Meyer, Curtis A., 4222 Childress
- Meyer, Harry H., 4903 Delmar
- Meyer, Herman M., 603 Metropolitan Bldg.
- Meyer, Oscar D., 6029 S. Kingshighway
- Meyerhardt, Milton, Pasteur Bldg.
- Meyers, Montague M., 1300 Grant Road



**WHEN HE'S  
TEMPTED BY  
FORBIDDEN  
FOODS . . .**

What's a man to do? He's  
tired of dieting.  
The vision of new  
health and a better  
figure faded with  
the first 10 pounds . . .  
and now all he can see  
wherever he goes is food,  
food, tempting food . . .



- One 2.5 mg. tablet of DESOXYN

Hydrochloride, an hour before breakfast and lunch, can provide meal-to-meal aid in curbing the appetite. It also imparts a desire for greater activity and decreases the feeling of fatigue. A third tablet may be taken in midafternoon if necessary, and if it does not cause insomnia. ● Weight for weight, DESOXYN is more potent than other sympathomimetic amines, so that *smaller doses* may be used. Many investigators who have used DESOXYN extensively claim that its action is *faster and more prolonged* with relatively *few side-effects*.

With the correct dosage, little or no pressor effect has been observed.

- As an adjunct to the treatment of obesity, as relief for the depression of convalescence, as a safe, effective stimulant for the central nervous system, remember DESOXYN Hydrochloride.

For the complete story on indications and dosages, write to  
ABBOTT LABORATORIES, North Chicago, Illinois.

Prescribe

**DESOXYN<sup>®</sup>**  
HYDROCHLORIDE

(Methamphetamine Hydrochloride, Abbott)

TABLETS, 2.5 and 5 mg.

ELIXIR, 20 mg. per fluidounce.

AMPOULES, 20 mg. per cc.

- Meyera, Raymond A., 7135 Forsyth Blvd., University City  
Michael, Vernon E., 5634 Lisette Ave.  
Michaelree, John F., Harper Bldg., Maplewood  
Middleman, Isadore C., Pasteur Bldg.  
Mier, Thomas M., 320 Lister Bldg.  
Milder, Benjamin, 601 Humboldt Bldg.  
Miller, Charles W., 408 Humboldt Bldg.  
Miller, Dan Tucker, 1001 Paul Brown Bldg.  
Miller, H. Edward, 637 Missouri Bldg.  
Millikin, Lester A., 2608 S. Kingshighway  
Miloslavich, Edward L., 2415 N. Kingshighway  
Milster, Clyde R., 409 Frisco Bldg.  
Miltnerberger, Paul C., 919 N. Taylor  
Mira, Joseph J., 701 W. Delmar, Alton, Ill.  
Missey, Wilburn C., Jr., 5735 Goener Ave.  
Mistachkin, Norman Leonard, 4482 Washington  
Moeller, Carl E., 3537 S. Jefferson Ave.  
Mohlholm, Hans B., 4500 West Pine Blvd.  
Montani, Charles, 5147 Daggett St.  
Moore, Neil S., 729 Frisco Bldg.  
Moore, Robert A., 602 South Euclid Ave.  
Moore, Walter L., Route 1, Box 216, Clayton  
Moore, Sherwood, Barnes Hospital  
Moore, Stanley W., 720 North 5th St., Vandalia, Ill.  
Moraues, Vicente, 1402 South Grand  
Moreland, Joseph I., 524 Metropolitan Bldg.  
Morfit, John C., 7112 Wydown Blvd., Clayton  
Morrin, Kevin C., 5251 Westminster  
Morris, Harvey E., 4643 Steinlage Drive  
Morris, Mary E., 4952 Maryland  
Morton, Roscoe F., 1515 Lafayette  
Moskopp, Peter G., 3736 Dunnica Ave.  
Motzel, Albert J., 6238 Washington  
Mountjoy, Grace S., 4439 Floriss Place  
Mowrey, William O., 3633 Fair Ave.  
Muckerman, Richard I. C., 609 W. Polo Drive, Clayton  
Mudd, J. Gerald, 35 Godwin Lane  
Mudd, James L., 914 Missouri Bldg.  
Mueller, Charles B., 600 S. Kingshighway  
Mueller, Clarence E., 4636a Moraine Ave.  
Mueller, Joseph A., 2924 S. Grand  
Mueller, Morris A., 24 Deerfield Road, Ladue  
Mueller, Robert, 975 Arcade Bldg.  
Mueller, Robert J., 322 Beaumont Bldg.  
Mueller, W. K., 601 University Club Bldg.  
Muethner, Raymond O., 634 N. Grand  
Mullarky, Wilbur A., 5422 Devonshire  
Mulligan, Leo V., 916 Missouri Theatre Bldg.  
Munsch, Augustus P., 306 Humboldt Bldg.  
Munsch, Girard A., 33 N. Meramec Ave.  
Murphy, George J., 4228 Miraleste Drive, San Pedro, Calif.  
Murphy, James Patrick, 934 University Club Bldg.  
Murphy, John C., 3720 Washington Blvd.  
Murphy, John P., 308 Lister Bldg.  
Murphy, John Patrick, Jr., 835 Missouri Theatre Bldg.  
Murphy, Paul, 3842 Flora Place  
Murray, Louis F., 605 Russell Blvd.  
Mutshnick, Clara P., 3103 Shenandoah Ave.  
Myers, E. Lee, 208 Wall Bldg.  
Neils, Julius K., 2530 N. W. Westover Road, Portland 10, Ore.  
Neilson, Arthur W., 6349 Alexander Drive  
Neilson, Charles H., 306 Humboldt Bldg.  
Nelson, William, 5449 Delmar Blvd.  
Nemec, Stanley S., 205 Wall Bldg.  
Nemours, Paul R., 7477 Clayton Road  
Nester, Charles A., 4161 Tyroleon Ave.  
Nester, Gerard A., 5600 South Compton Ave.  
Neuhoff, Fritz, 3206 Lafayette Ave.  
Neun, William F., 5862 Delor St.  
Newman, Harold G., Beaumont Bldg.  
Nicholson, Clarence M., Pennsylvania Hotel, St. Petersburg, Fla.  
Nicolai, Charles H., No. 7 Treebrook Lane, Clayton  
Niedermeyer, Edward L., 3623-E 4th, Spokane 15, Wash.  
Noah, Joseph W., 732 Beaumont Bldg.  
Nolan, Charles J., 736 University Club Bldg.  
Nolan, James F., 1407 S. Hope St., Los Angeles 15, Calif.  
Noller, Henry W., 1022 Art Hill Place  
Northup, Glenn R., 740 South 4th St.  
Norton, William Hudson, 729 Missouri Bldg.  
Nye, Robert S., 3201 Arsenal St.  
Obermeyer, Charles G., 4926 Lansdowne Ave.  
O'Brien, Edward C., 3632 Flora Place  
O'Brien, Robert M., 1023 Missouri Theatre Bldg.  
Odell, Richard T., 600 S. Kingshighway  
O'Dowd, James A., 2919 S. Kingshighway Blvd.  
Ogura, Joseph H., 5281 Waterman  
Ohmoto, Masao, 606 Wall Bldg.  
O'Keefe, Charles D., 718 Beaumont Bldg.  
Olmsted, William H., 1011 Beaumont Bldg.  
O'Malley, Eugene J., 504 Missouri Bldg.  
O'Neill, John B., 1222 Missouri Bldg.  
Oppenheimer, Henry E., 327 Metropolitan Bldg.  
O'Reilly, Daniel E., 6369 Pershing  
Orenstein, Joseph M., 440 N. Taylor  
Orgel, M. Norman, 626 Metropolitan Bldg.  
O'Sullivan, George Andrew, 421 Schirmer St.  
Owen, William C., 3833 Folsom  
Pampush, James J., APO 872, Bremerhaven, Germany  
Paquin, Albert J., Jr., 1515 Lafayette Ave.  
Parato, John M., 3720 N. Grand  
Pareira, Morton D., 743 Yale Ave.  
Parker, Thomas W., 605 Clara  
Parker, William, 807 Carleton Bldg.  
Passanante, Bartholomew M., 6317 Southwood Ave.  
Patton, Fred W., 1110 Oakland Ave., Mt. Vernon, Ill.  
Patton, John F., 723 University Club Bldg.  
Patton, Leslie E., 701 Beaumont Bldg.  
Payne, Richard J., 718 University Club Bldg.  
Pearl, John F., Commercial Hotel Bldg., St. Clair  
Peden, Joseph C., 1015 Missouri Bldg.  
Peeler, James O., 2505 North 15th St.  
Pelz, Mort D., 607 North Grand  
Pennell, Melvin T., 916 Royal Ave., Alton, Ill.  
Penney, David L., 317 Wall Bldg.  
Pernoud, Flavius G., 975 Arcade Bldg.  
Pernoud, Flavius G., Jr., 3615 Utah Place  
Pernoud, Michael F., 3615 Utah Place  
Peters, Augustus W., 4145a South Grand  
Peugnet, Hubert B., 500 N. Skinker  
Pfeifer, Oliver Conrad, 6567 Murdock  
Phelan, Emma, 5321 Barmter Ave.  
Pickrell, Claude D., 406 Frisco Bldg.  
Piekariski, Anthony Andrew, 1525a Cass Ave.  
Pieper, Henry G., 1301 Geyer Ave.  
Pitzman, Marsh, 6 Kingsbury Place  
Plag, Albert F., 3150 Morganford Road  
Ploch, Bernard, 3527 Osage Ave.  
Ploehn, Emma, 2728 Geyer Ave.  
Plumpe, W. Tupper, 4415 Minnesota Ave.  
Poe, John S., 108 E. 86th St., New York 28, N. Y.  
Pollock, Ellis L., 3958 Arsenal St.  
Pollock, Maxwell A., 508 N. Grand  
Portuondo, Bonaventura C., 3532 Flora Ct.  
Post, Lawrence T., 524 Metropolitan Bldg.  
Post, Martin Hayward, Jr., 520 Metropolitan Bldg.  
Potashnick, Robert, 6324 San Bonita Ave.  
Pote, Thomas B., 4925 Park View Place  
Potter, Allen B., 5203 Chippewa  
Powell, Carl A., 3511 Lucas  
Powell, Earl A., 729 Frisco Bldg.  
Powell, Rudolph V., 512 Beaumont Bldg.  
Powers, Pierce W., 1106 Missouri Bldg.  
Pranger, Sylvester Henry, 4952 Maryland  
Presnell, Cleitus A., 634 N. Grand Blvd.  
Preston, John F., Jr., 1800 South Second St.  
Press, Maurice Jerome, 7508 York Drive  
Probstein, Jacob, 108 Lister Bldg.  
Proetz, Arthur W., 1010 Beaumont Bldg.  
Pruett, Burchard S., 460 Belleville Blvd.  
Pruett, Daniel S., 6006 Virginia Ave.  
Pruett, Hubert S., 2739 N. Grand  
Puckett, Charles L., 4362 Washington Ave.  
Puckett, Cordelia, 69 Crestwood Drive  
Pulliam, Madison J., 618 University Club Bldg.  
Purcell, Harry K., 4660 Maryland Ave.  
Pyne, Herbert S., 2752 Cherokee St.  
Quarles, E. Bryan, Vet. Adm. Bldg., Washington 25, D. C.  
Quinn, Abram T., 6917 Fyler Ave.  
Quirin, Warren S., 2621 South Jefferson  
Raemdonck, Alphonse J., 4390 West Pine Blvd.  
Ramos, Raul L., 4307a South Grand  
Rassieur, Louis, Congress Hotel  
Ray, Richmond H., 5930 Southwest Ave  
Ready, James Hartigan, R. R. No. 2, Shackleford Road, Florissant  
Regan, William W., 5330 Pershing  
Reh, Edward P., 5548 Hubert St.  
Reich, Harry A., 3729 Connecticut  
Reiches, Aaron J., 4500 Olive St.  
Reilly, Leo J., 8105 Page Ave.  
Reilly, Terence M., 2102 S. Grand  
Reim, Hugo, 416 Metropolitan Bldg.  
Reis, Carl J., 301 Humboldt Bldg.  
Rendleman, George F., 992 Arcade Bldg.  
Repetto, Albert M., 3747 Dunnica Ave.  
Resnikoff, Lewis E., 3407a South Jefferson  
Reuter, Louis A., No. 2 Kingsbury Place  
Reynolds, Fred, 4952 Maryland Ave.  
Rice, Earl R., Frisco Bldg.  
Rich, George T., 2641 Midwood Ave., Toledo, Ohio  
Richman, Elmer, 1034 Missouri Bldg.  
Ries, Douglas A., 635 Missouri Theatre Bldg.  
Riley, Ralph D., 1134 Missouri Bldg.  
Riley, William H., 4660 Maryland Ave.  
Ringo, Henry J., 840 Missouri Bldg.  
Riordan, James J., St. Johns Hospital, Tulsa, Okla.  
Riordan, Lawrence M., Lister Bldg.  
Ritchie, Frances R., 5233 Waterman Ave.  
Roane, John S., 5830 Mardel Ave.  
Roberts, Harold K., 1011 Beaumont Bldg.  
Robertson, Frank G., 833 Missouri Theatre Bldg.  
Robertson, LeRoy L., 340 Beaumont Bldg.  
Roblee, Melvin A., 201 Beaumont Bldg.  
Roche, Maurice B., 418 Beaumont Bldg.  
Rodgers, Elrie P., 7115 Southwest Ave.  
Roe, Allen N., 3834 Lawler Drive  
Rohlfing, Edwin H., 816 Beaumont Bldg.  
Rohlfing, Walter H., 4724 Gravois  
Romendick, Samuel S., 4497 Pershing Ave.  
Rose, Dalton Keats, 316 Beaumont Bldg.  
Rosen, Charles S., 408 Humboldt Bldg.  
Rosenbaum, Harry D., 840 Beaumont Bldg.  
Rosenberg, Meyer B., 4209 S. Kingshighway  
Rosenfeld, Henry, 3903 Olive St.  
Rosenfeld, Herman, 621 Wall Bldg.  
Rosenthal, Leonard G., 6651 Enright Ave.  
Rossen, Julius A., 3903 Olive St.  
Roth, John J., 4705 Prague  
Rothman, David, 462 N. Taylor Ave.  
Rothman, Paul M., 3103 Shenandoah  
Rotter, Julius C., 2603 Cherokee St.  
Rouse, David M., La Belle  
Rovston, Grandison D., 207 Beaumont Bldg.  
Ruddell, George W., 1259 N. Kingshighway  
Ruhling, Rudolph, 1114 Missouri Theatre Bldg.  
Rund, Emmet H., 5417 S. Grand  
Runde, F. William, 920 Missouri Bldg.  
Russi, Simon, McGuire Hospital, Richmond, Va.  
Ryan, Linus M., 515 Wall Bldg.  
Ryan, Robert E., 615 Wall Bldg.  
Ryburn, John Patrick, 2345 Hebert St.  
Saccomanno, Geno, 1402 S. Grand  
Sachar, Leo A., 108 Lister Bldg.  
Sachs, Ernst, 530 Beaumont Bldg.  
St. John, Dewey, 833 Metropolitan Bldg.  
St. John, Thomas C., Metropolitan Bldg.  
Sale, Llewellyn, 109 Lister Bldg.  
Sale, Llewellyn, Jr., 108 Lister Bldg.  
Salter, John C., 935 Arcade Bldg.  
Sanders, Robert D., 1502 Cass Ave.  
Sanders, Theodore E., 840 Beaumont Bldg.  
Sanderl, Harry, 730 Missouri Bldg.  
Sanford, Joseph Hoy, 401 Beaumont Bldg.  
Sante, LeRoy, 606 Missouri Theatre Bldg.  
Saslow, George, 517 South Euclid Ave.  
Sassin, Edmond F., 324 Frisco Bldg.  
Satterfield, Val B., 415 Lister Bldg.  
Sauer, F. J. Dean, 916 Missouri Theatre Bldg.  
Sauer, William E., 218 Beaumont Bldg.  
Saunders, George M., 602 South Euclid Ave.  
Sausville, Albert J., 8363 Halls Ferry Road  
Saxton, John A., Jr., 1430 Carroll St.  
Schaff, Katherine M., 410 Congress Hotel  
Schechter, Samuel E., 6469 San Bonita Ave.  
Scheff, Harold, 703 University Club Bldg.  
Scherman, Victor E., 830 Beaumont Bldg.  
Scherrer, Fred W., Jr., 7049 Westmoreland  
Schlenker, Lawrence, 3515 South Grand



*Your* **LABORATORIES**  
*Our* **Responsibility**

**CLINICAL PATHOLOGY  
PATHOLOGIC ANATOMY**

**DUNCAN LABORATORIES**

*Established 1921*

**909 Argyle Building · · Kansas City 6, Mo.**

**230 Frisco Building · · Joplin, Missouri**

**RALPH EMERSON DUNCAN, M. D.**

**MAURICE L. JONES, M.D.**

In addition to diagnostic laboratory services, chemically accurate and clinically tested reagents, solutions, stains and culture media are available for immediate delivery.

- Schlossstein, Adolph G., 3153 Longfellow Ave.  
Schlueter, Newell W., Pasteur Bldg.  
Schlueter, Robert E., 514 Metropolitan Bldg.  
Schmiemeier, Herman August, 6811a Gravois  
Schmiemeier, Roy H., 6422 S. Kingshighway Blvd.  
Schmitz, Edgar F., 501 Metropolitan Bldg.  
Schneider, Sam, 440 N. Taylor  
Schnoebelen, Paul C., 462 N. Taylor  
Schoetker, George H., 8923 Gravois  
Scholz, Roy P., 619 Metropolitan Bldg.  
Schrepel, Herbert O., 16 Hampton Village Med. Center  
Schuchat, W. Louis, 2200 Chouteau Ave.  
Schuck, Philip, 1703 South Grand  
Schulein, Vernon E., 6232 Oakland Ave.  
Schumacher, Cyril W., 4991 Thrush  
Schwartz, Frederick O., 311 Metropolitan Bldg.  
Schwartz, Henry G., 600 S. Kingshighway  
Schwartzmann, John R., 433 N. Tucson Blvd., Tucson, Ariz.  
Sciortino, Gaspare, 218 Lemay Ferry Road  
Sciortino, John S., 801 Beaumont Bldg.  
Scobee, Richard G., 640 S. Kingshighway  
Scopolite, Joseph A., 4222 North Grand Ave.  
Scott, Elwin P., 3258 Lafayette Ave.  
Scott, Wendell G., 4952 Maryland  
Seddon, John W., 4500 West Pine Blvd.  
Seelig, Major G., 54 Belleau Ave., Atherton, Calif.  
Seib, George A., 2323 Lafayette Ave.  
Senseney, Eugene T., 462 N. Taylor  
Senturia, Ben H., 500 N. Skinker Blvd.  
Senturia, Hyman R., 462 N. Taylor  
Sertle, John D., 2801a California Ave.  
Sevin, Omar R., 4952 Maryland  
Sewing, Arthur H., 2342 St. Louis Ave.  
Sexton, Daniel L., 920 University Club Bldg.  
Sexton, Elmer Edwin, 1020 Paul Brown Bldg.  
Shackelford, Horace H., 504 Wall Bldg.  
Shahan, Philip T., 524 Metropolitan Bldg.  
Shahan, William E., 524 Metropolitan Bldg.  
Shaner, John F., 912 Beaumont Bldg.  
Shanklin, Benjamin, 1514 S. Jefferson Ave.  
Sheedy, John A., 439 W. St. James Place, Chicago, Ill.  
Sheets, John S., 2500 S. Kingshighway  
Sheets, Martin E., 4329 Manchester Ave.  
Shelton, Harold J., 3608 South Grand  
Sheridan, Edmund R., 2602 S. Grand Blvd.  
Sherwin, Charles F., 3720 Washington  
Sherwin, Charles S., 3528a Nebraska  
Shier, Barbara, 4500 West Pine  
Shier, Julius M., 4398 West Pine Blvd.  
Shobe, Frank O., 602 S. Euclid  
Shrader, E. Lee, 415 Beaumont Bldg.  
Shreffler, Algine R., 1020 Missouri Bldg.  
Shutt, Cleveland H., 220 N. 4th St.  
Shy, James C., 4047a Gravois Ave.  
Siddall, H. Stewart, 230 E. Superior St., Chicago 11, Ill.  
Siebert, Walter Joseph, DePaul Hospital  
Sievers, Edward Faville, 635 Midland Ave.  
Signorelli, Andrew Joseph, 2801 N. Taylor  
Silvermintz, Saul D., 6623b Washington  
Simon, Jerome I., 830 Beaumont Bldg.  
Simon, Selig, 4475 West Pine Blvd.  
Simpson, Eber, 3739 Gravois  
Simpson, Guy L., No. 13 The Orchards, Clayton  
Sinner, Bernard L., 325 University Club Bldg.  
Sisk, James C., 7134 Maryland Ave.  
Skeffington, Mary Jane, 3615 Olive St.  
Smit, William M., 5285 Washington Blvd.  
Smith, Albert G., University Hospital, Little Rock, Ark.  
Smith, Benjamin F., Jr., 4947 Buckingham Court  
Smith, Dudley R., 940 Missouri Bldg.  
Smith, Frank J., 4930 Lindell Blvd.  
Smith, George P., 1455 Monroe St., Denver, Colo.  
Smith, Herbert P., 5205a Chippewa St.  
Smith, Hugh R., 430 University Club Bldg.  
Smith, J. Earl, 4450 Westminster Place  
Smith, James M., 306 Humboldt Bldg.  
Smith, Milton, 830 Beaumont Medical Bldg.  
Smith, Oda Oscar, 7436 Florissant Road  
Smith, Reuben M., 4145 S. Grand Blvd.  
Smith, Robert M., 114 N. Taylor  
Smolik, Edmund A., 409 Beaumont Bldg.  
Snyder, Edward N., 10701 Wellworth Ave., Los Angeles, Calif.  
Soper, Horace W., 515 Wall Bldg.  
Soule, Samuel D., 108 Lister Bldg.  
Spain, Kate C., 5321 Savoy Court  
Spencer, Selden, 718 University Club Bldg.  
Spinzig, Edgar W., 5 Hawbrook Lane, Kirkwood  
Spivy, Raymond M., 502 Beaumont Bldg.  
Spoenemann, Walter H., 1506 St. Louis Ave.  
Stahl, Phineas D., 301 Pasteur Bldg.  
Stanze, Frank J., 3924 S. Grand  
Starkloff, Gene B., 5256 Westminster Place  
Starkloff, Max, 512 Dover Place  
Stecker, George, 617 Missouri Theatre Bldg.  
Stein, Arthur W., 3606 Gravois  
Steinberg, Franz U., 462 N. Taylor  
Steiner, Albert S., 224 Commercial Bldg.  
Stephens, LeRoy J., 325 Wilshus Ave.  
Stephens, Louis F., 3012 Lafayette Ave.  
Stevens, Robert W., 1222 Missouri Theatre Bldg.  
Stewart, Floyd, 1507 Chemical Bldg.  
Stewart, John W., 4660 Maryland  
Stindel, Charles Ernst, 6205 Tholozan  
Stolar, Jacob, 508 N. Grand  
Stone, Charles A., 3720 Washington Ave.  
Stone, Edna M., 4916 Odell  
Stranz, Roman J., 4500a Virginia Ave.  
Strauss, Arthur E., 601 Humboldt Bldg.  
Striegel, Bernard F., 1875 Madison St.  
Stroud, C. Malone, 625 University Club Bldg.  
Strub, Giles J., A. P. O. 407, New York, N. Y.  
Stryker, Garold V., 1144 Missouri Bldg.  
Stubbs, James B., 1284 Boland Place, Richmond Heights  
Stude, William Carl, 401 Humboldt Bldg.  
Sturhahn, Ferdinand O., 330 West Lockwood Ave.  
Stutsman, Albert C., 640 Beaumont Bldg.  
Sullivan, Clement J., 7200 Colgate Ave., University City  
Sunderman, Raymond C., 4943 Natural Bridge  
Susanka, William Dee, 10061 Lakeside Drive, Afton  
Sutton, James A., 1135 South Kingshighway  
Sweet, Herbert C., 5616 Maxwell Ave., Afton  
Swkosky, Frank J., 2528 South Jefferson  
Szwyzk, Thaddeus, 4473 Chippewa  
Tabankin, Alvin, 2107 S. Grand  
Tainter, Frank J., 401 Humboldt Bldg.  
Talbot, Hudson, 427 Metropolitan Bldg.  
Tanner, Robert H., 6150 Oakland Ave.  
Tapper, Stephen M., 1010 Paul Brown Bldg.  
Tate, Lloyd Lewis, 403 Frisco Bldg.  
Taussig, Barrett L., 316 Lister Bldg.  
Tess, Melvin J. H., 3611 St. Louis Ave.  
Thale, Thomas, 1420 Grattan St.  
Thieme, Harry L., 4149 Flora Place  
Thierry, Charles W., Jr., 5819 De Giverville  
Thimsen, Udell S., University of Chicago, Chicago, Ill.  
Thoma, George E., Jr., 1325 S. Grand  
Thomas, Charles S., 644 Frisco Bldg.  
Thompson, Arthur M., 1242 Missouri Bldg.  
Thompson, John William, Jr., 4952 Maryland  
Thompson, Lawrence D., 634 N. Grand  
Thompson, Ralph L., 601 University Club Bldg.  
Thomson, David A., 3119 N. Grand  
Thurston, Don L., 21 Cambridge Court  
Thym, Henry P., 513 Metropolitan Bldg.  
Tibe, Matilda L., 7110 Michigan Ave.  
Tichenor, Robert W., Sappington  
Titterington, Paul F., 211 Metropolitan Bldg.  
Tjoflat, Oliver Eugene, 4224 N. Grand  
Tobias, Norman, 700 South Meramec, Clayton  
Todd, D. Clay, 5669 Cabanne  
Tomlinson, William Loren, 3427 Washington St.  
Tonelli, George L., 503 Wall Bldg.  
Tooker, Charles W., 1006 Carleton Bldg.  
Torin, Bernice Albert, 209 Lister Bldg.  
Trafton, Harold F., 1515 Lafayette  
Tremain, Irl George, 4448 Shaw Ave.  
Treiman, Robert C., 7369 Maryland  
Trigg, Joseph F., 219 Metropolitan Bldg.  
Tripodi, Anthony M., Jones Bldg., Tacoma, Wash.  
Trotter, Francis O., Jr., 1515 Lafayette  
Turner, Rush, 1251 Blackstone Ave.  
Tuthill, Sanford W., 3740 Republic, New Orleans, La.  
Twedell, Donald Louis, 4143a N. Newstead  
Tyzzer, Robert N., 3130 Kingsley, San Diego, Calif.  
Uhlemeyer, Henry A., 16 Hampton Village Plaza  
Uhlemeyer, Henry A., Jr., 72 Bellerive Acres  
Unterberg, Hillel, 325 Frisco Bldg.  
Urban, Emanuel T., 1537 S. Grand  
Vandover, John T., 3505 Crittenden St.  
Van Vranden, Eugene Edward, School of Aviation Medicine, Randolph AFB, Tex.  
Vatterott, Paul B., 3613 St. Gregory Lane, Overland  
Vaughan, John R., 1122 Missouri Bldg.  
Vaughan, J. Russell, 1122 Missouri Theatre Bldg.  
Veeder, Borden S., 816 Beaumont Bldg.  
Verda, Dominic J., 400 Lister Bldg.  
Vezeau, Stephen, 1504 S. Grand Blvd.  
Virant, John A., No. 2 Picardy Lane, Clayton  
Vitt, Alvin E., 615 Missouri Theatre Bldg.  
Vitt, Edwin F., 16 Hampton Village Plaza  
Viviano, Joseph G., 817 Metropolitan Bldg.  
Vivona, Stefano, 4307a S. Grand Blvd.  
Vogel, Eugene A., 3325 S. Grand Blvd.  
Voigt, William H., Jr., 330 Metropolitan Bldg.  
Vohs, Carl F., 610 Metropolitan Bldg.  
Von Kaelen, Joseph E., 551 Barnes Road  
Vournas, Christopher G., 201 Humbolt Bldg.  
Wade, James Paul, 1004 Missouri Bldg.  
Wagenbach, William F., 4755 Morganford Road  
Wall, Emmett D., 6270 Walsh  
Walsh, Alton L., 1325 S. Grand  
Walters, Harold E., 43 Washington Terrace  
Walters, Laura, 1515 Lafayette  
Walters, William H., 3608 S. Grand  
Walton, Franklin E., 602 S. Euclid Ave.  
Warner, Robert G., 818 Olive St.  
Wasserman, Helman C., 4500 Olive St.  
Wattenberg, Carl A., 49 Kingsbury Place  
Wayland, Thomas A., 3127a S. Grand Blvd.  
Webb, Lewis M., 115 Lake Forest  
Webb, Marion A., 221 Lister Bldg.  
Webb, Paul Kingsley, 1508 Chemical Bldg.  
Weber, Eugene P., 601 Beaumont Bldg.  
Weber, Sol, 336 University Club Bldg.  
Wegner, Carl R., 630 S. Kingshighway Blvd.  
Weiler, Thomas J., 7506 North St., Tacoma, Wash.  
Weinel, Francis G., 5205a Chippewa St.  
Weinsberg, Charles H., 3323 Lafayette  
Weinsberg, William C., 3606 Gravois  
Weintraub, Solomon A., 4500 Olive St.  
Weir, Don C., 606 Missouri Theatre Bldg.  
Weir, Royal A., 462 N. Taylor Ave.  
Weis, Matthew W., 914 Missouri Theatre Bldg.  
Weiss, Richard S., 512 Beaumont Bldg.  
Weiss, William, 3661 Lafayette Ave.  
Weiterer, Herman L., 3514 Hebert St.  
Welborn, William Singleton, 6811a Washington Blvd.  
Welch, Hooper W., 630 Missouri Theatre Bldg.  
Welsh, Laurence C., 4989 Neosho St.  
Wennerman, Sam F., 1045 Missouri Bldg.  
Wentzel, Louis Robert, 2726 Chouteau Ave.  
Wenzel, Peter S., 462 N. Taylor Ave.  
Werner, August A., 404 Humboldt Bldg.  
Werner, William A., 4105 Magnolia  
Westerman, Henry C., 7160 Princeton Ave.  
Westlake, Samuel B., 309 Beaumont Bldg.  
Westphaelinger, Henry F., 1901 Alfred Ave.  
Weyerich, Leon F., 8212 N. Broadway  
White, Charles A., 1114 Missouri Theatre Bldg.  
White, Orville O., 1194 Hodiamont  
White, Park J., 337 N. Euclid Ave.  
White, T. Wistar, 224 Lister Bldg.  
White, William H., 2803 N. Kingshighway  
White, W. H., Jr., 214 Lister Bldg.  
Wiatt, William S., 742 Missouri Bldg.  
Wiegand, Herbert C., 804 McKnight Rd., University City  
Wiener, Meyer, Box 685, Coronado, Calif.



Wiese, Harry W., 2301 S. Kingshighway  
Wilcox, Claude V., 3228 Ivanhoe  
Wild, Aloysius Arthur, 3901 W. Florissant  
Wilhelmi, Otto J., 218 University Club  
Bldg.  
Will, Leo Archibald, 205 Humboldt Bldg.  
Williams, Ray D., 114 N. Taylor Ave.  
Williamson, Walter E., 235 Frisco Bldg.  
Wilson, Keith S., 4952 Maryland Ave.  
Wilson, Kenneth O., 755 East Monroe Ave.,  
Kirkwood  
Wilucki, Leo E., 5402 Gravois Ave.  
Wilucki, Melvin R., 5402a Gravois Ave.  
Wimber, Thomas C., 626 Metropolitan  
Bldg.  
Winterer, Roland A., Zinzer Place R. 2,  
Afton  
Wippo, Edgar W., 4600a Moraine Ave.

Aiken, George Alfred, Marshall  
Aiken, Richard Franklin, Marshall  
Bickford, Wallace M., Marshall  
Doyle, Joseph P., Sweet Springs  
Haynes, Robert Clark, Marshall  
Kelly, Robert Q., Marshall  
Kennedy, Robert W., Marshall

Cline, Jesse A., Oran  
Critchlow, William C., Sikeston  
Dorris, George T., Ilmo  
Dunaway, Howard A., Sikeston  
Ferguson, Wilson J., Sikeston

Archer, Perry C., Shelbyville

Ames, Alfred C., Mountain Grove  
Barnes, Ford A., Thayer  
Bohrer, E. Claude, West Plains  
Burns, Thomas J., Houston  
Callihan, C. F., West Plains  
Cooper, Claude W., Thayer  
Denne, Richard W., Mountain Grove

Brandon, John P., Essex  
Davis, Samuel S., Dexter

Allen, William H., Nevada  
Barone, Paul L., Nevada  
Bunch, James R., Nevada  
Davis, C. Braxton, Nevada  
Davis, Charles B., Walker  
Dawson, John W., Eldorado Springs

Beers, Ellsworth G., Seymour

Wissner, Seth, 6150 Oakland Ave.  
Witt, Clyde M., 815 Dugan  
Wittwer, Hugh J., 5940 Marwinette  
Wood, Bennett R., 3442 Geraldine Ave.  
Wood, Harold, 1033 E. McDowell Rd.,  
Phoenix, Ariz.  
Wood, William G., 1001a McCausland  
Woodruff, Frederick E., 1030 Beaumont  
Bldg.  
Woolsey, Robert D., 16 Hampton Village  
Med. Center  
Wotawa, William J., 3804 Wilmington  
Wulff, George J. L., Jr., 12 Princeton Ave.,  
University City  
Yanow, Mitchell, 4616 Lindell  
Young, Leo P., 2621 S. Jefferson Ave.  
Young, Lillian V., Route 21, Box 646,  
Clayton

#### SALINE COUNTY MEDICAL SOCIETY

Lawless, Charles L., Marshall  
Lawrence, John Richard, Marshall  
Lockwood, W. E., Slater  
McBurney, C. A., Slater  
McCorkle, E. Lee, Marshall  
Mead, Samuel R., Slater

#### SCOTT COUNTY MEDICAL SOCIETY

Finney, W. O., Chaffee  
Lee, A. E., Ilmo  
McClure, Thomas C., Sikeston  
Martin, Aretus D., Sikeston  
Mellies, Chester J., Sikeston  
Miller, Herbert S., Sikeston

#### SHELBY COUNTY MEDICAL SOCIETY

Harlan, Delly Lee, Clarence  
LeFevre, Harry M., Shelbyville

#### SOUTH CENTRAL COUNTIES MEDICAL SOCIETY

(Howell-Oregon-Texas-Wright-Douglas)

Doan, Deborah, Bakersfield  
Frame, Homer Glenn, Mountain Grove  
Fuson, John Alva, Mansfield  
Gentry, Marvin Carroll, Ava  
Harsh, Ralph T., 4149 Cleveland, St. Louis  
Hogg, Garrett S., Jr., Cabool  
Mott, James R., Hartville  
Musser, Richard E., Iberia

#### STODDARD COUNTY MEDICAL SOCIETY

Dieckman, William C., Dexter  
Harris, Hinman A., Bloomfield  
Hux, William J., Essex

#### VERNON-CEDAR COUNTY MEDICAL SOCIETY

King, Elbert Rife, Nevada  
Love, Walter S., Nevada  
Martin, Forrest Logan, Nevada  
Newlon, John S., Nevada  
O'Dell, Timothy T., Huntington, W. Va.

#### WEBSTER COUNTY MEDICAL SOCIETY

Beers, Robert G., Marshfield

Younger, Anita, 3624 Russell Blvd.  
Younger, Ernest, 3624 Russell Blvd.  
Younger, Jesse, Vets Hospital, Jefferson  
Barracks  
Youngman, George A., 5439 Gravois  
Zahorsky, John, Steelville  
Zahorsky, Theodore S., 16 Hampton Vil-  
lage Plaza  
Zahtz, Hyman, 5893 Cote Brillante Ave.  
Zeinert, Oliver B., 34 Broadview Drive  
Zeitler, William T., 3102 S. Grand Blvd.  
Zentay, Paul J., 1023 Missouri Bldg.  
Ziegelmeyer, John S., 3733 Lindell Blvd.  
Zillgitt, George H., 4501a Manchester Ave.  
Zingale, Frank G., 3701 Grandel Square  
Zink, Oscar C., 9 The Orchards, Clayton  
Zwart, Claude H., 719 Missouri Bldg.

Nix, Winston K., Marshall  
Reid, James A., Marshall  
Robinson, Don, Slater  
Sharp, William L., 4295 Olive St., St. Louis  
Simmons, Sterling P., Marshall  
Sullivan, B. Hazard, Miami  
Veatch, Charles A., Marshall

Nienstedt, Elam J., Sikeston  
Sample, George A., Chaffee  
Sargent, Alden P., Sikeston  
Throgmorton, Howard B., Sikeston  
Urban, Edgar Dale, Sikeston

Parker, Roy H., Hunnewell

Norman, Robert M., Ava  
Randall, Leslie, Licking  
Reed, Henry L., Licking  
Ryan, Robert A., Mountain Grove  
Smith, Rollin H., West Plains  
Thornburgh, Albert H., West Plains  
Van Noy, Levi T., Norwood

Touhill, Neal J., Dexter  
Waddle, Theodore L., Dexter

Pearse, Roy W., Jr., Nevada  
Potter, Reese, 223 Sylvester, Webster  
Groves  
Richter, William B., Stockton  
Todd, Thomas B., Nevada  
Wray, Rolla Boyd, Nevada

Macdonnell, C. R., Marshfield

## BOOK REVIEWS

**SEXUAL BEHAVIOR IN THE HUMAN MALE** by Alfred C. Kinsey, Professor of Zoology, Indiana University; Wardell B. Pomeroy, Research Associate, Indiana University; and Clyde E. Martin, Research Associate, Indiana University. Philadelphia and London. W. B. Saunders Company. 1948. Price \$6.50.

This book is a colossal case history study of sex habits of about 12,000 American males of all ages, of all social and economic classes, of all levels of education from prekindergarten to college professors, of various occupational, religious and geographic distribution. The information presented is extremely pertinent and is needed by physicians in caring for patients who consult them for information and advice, and for psychosomatic complaints based on conflicts involving personal sex practices and maladjustments. The authors present concise and elaborate scientific data completely divorced from questions of moral value and social custom. They bring into consideration such matters as sexual adjustments in marriage, sexual guidance of children, premarital sexual adjustments of youth, sex education, sexual activities which are in conflict with

the mores, and problems confronting persons who are interested in social control of behavior through religion, custom and the forces of law.

The elaborate data are presented in statistical tables accompanied by lucid and detailed discussions on the extent and development of impotence, the relation of premarital patterns to subsequent adjustments in marriage and of early sexual activity to later sexual performance. Especially interesting and amazing are the detailed data on preadolescent sexual activity. The incidence of potency and sex drive in the teen-age group and the high incidence of premarital and extra-marital outlets are surprising. Equally amazing and surprising are the sources of such outlets indicating that forthcoming statistics on female behavior may prove very enlightening. The present concepts of normality regarding sex must be greatly broadened and extended. The human being at least in part is a sexual animal. What is normal and what is abnormal, the incidence and frequency of homosexuality, oral eroticism and animal outlet among various groups of humans will startle even the calloused medical man.

For the lawyer, judge, social worker, priest, minister and chaplain, the factual comparison of biologic factors and man-made regulations in determining the patterns of human sexual behavior, the discussion of "sex sub-

limation" and the legal and religious aspects of normal and abnormal sex behavior will provide much food for thought and deliberation. The physician will find specific answers to specific questions that will aid in resolving problems and teaching parents, teachers and adolescents and permit giving adequate counsel and guidance to the newly married. The medical and psychiatric social worker will find a wealth of material heretofore unobtainable in books and in routine practice.

This book is becoming a best seller. It is being publicized by newspapers and radio commentators and is being serialized in a popular magazine. This reviewer has his doubts concerning the usefulness of mass distribution of this highly scientific data. An occasional intelligent lay reader may obtain considerable benefit by resolving some of his conflicts and ameliorating his guilt feelings concerning his supposedly abnormal sexual behavior, but most readers will derive only pornographic titillation.

L. C.

**HOW LIFE IS HANDED ON** by Cyril Bibby, M.A., M.Sc., F.L.S., Senior Lecturer at the College of St. Mark and St. John, London; Sometime Scholar of Queens' College, London; Author of "Sex Education: A Guide for Parents, Teachers and Youth Leaders." New York. Emerson Books, Inc. 1947. Price \$2.00.

This book is written in nontechnical language and consists of a review of the birth cycle in man and familiar species in the animal kingdom, also touching briefly on the courting, mating and growing-up periods.

The subject is treated with simplicity and clearness with diagrams to supplement the material.

A chapter of questions, things to do and glossary combine to make the monograph an excellent reference for high school students, mental and social hygiene clinics and the lay public.

The text is brief and may be read in a sitting.

E. H. T.

**OBSTETRICAL PRACTICE** by Alfred C. Beck, M.D., Professor of Obstetrics and Gynecology, Long Island College of Medicine; Obstetrician and Gynecologist-in-Chief, Long Island College Hospital, Brooklyn. More than One Thousand Illustrations. Fourth Edition. Baltimore. The Williams & Wilkins Company. 1947. Price \$7.00.

The fourth edition of this text purports, as did its predecessors, to cover the subject matter as concisely as possible in order to adapt it to the requirements of undergraduate students and young practitioners. Though the author has adhered to his plan by eliminating unnecessary references and avoiding controversy, it would seem that he had allowed his own interest in pathologic changes to divert him from his goal.

The whole book has been thoroughly revised so as to include recent advances in medical knowledge bearing on obstetrics. A chapter on obstetric analgesia, amnesia and analgesia has been added.

The text and references comprise 921 pages, logically divided into forty-seven chapters. A forty-three page index, containing but one apparent error, makes the subject matter easily accessible. More than one thousand well selected and well executed photographs and drawings illustrate the text.

The format is pleasing; the paper, type and printing make for easy reading. An unfortunate error in printing has been corrected by pasting in a loose sheet opposite page 387.

In chapter 12 the mechanism of labor is well presented. Exception might be taken to the description of the vascularity of the cervix at the onset of labor and the accompanying illustrations on pages 230 and 231. Perhaps undue emphasis has been placed on the role of alkalies

in the treatment of pyelitis of pregnancy, page 575.

Especially valuable and well illustrated is that portion of the book devoted to faults in the passages and soft part dystocias. The description of the bony pelvis is excellent. Insufficient space is devoted to the description of the treatment of puerperal sepsis with blood, sulfonamides and antibiotics. The treatment of syphilis during pregnancy with penicillin is adequately covered, however.

This book can be recommended as profitable reading to students and graduates as well.

R. G. H.

**PATHOLOGY, A TEXTBOOK OF, An Introduction to Medicine**, by William Boyd, M.D., Dipl., Psych., M.R.C.P., Edin. F.R.C.P., Lond., LL.D., Sask., M.D., Oslo F.R.S.C. Professor of Pathology and Bacteriology of the University of Toronto, Toronto. Fifth Edition. Thoroughly Revised, With 500 Illustrations and 30 Colored Plates. Philadelphia. Lea & Febiger. 1947. Price \$10.00.

This book follows the same general outline of other excellent textbooks of pathology. The first several chapters are devoted to pathologic states and tissue changes resulting from mechanical, physical and chemical agents and deficiency states. The most excellent chapters are devoted to the retrogressive tissue changes, inflammation and to tumors. The remaining portion of the book devotes chapters to pathology of the various systems and, when necessary, to subdivisions of systems to classify and clarify pathologic states.

The bibliographic references with each chapter are adequate. The discussions of gross and microscopic pathology and the accompanying illustrations and photomicrographs are excellent. Because of the completeness of the field of pathology, which the authors attempt to cover in a relatively small book, the discussions are condensed, expressions of diversity of opinion are minimized and discussions of application of clinical pathology and pathologic physiology are also minimized.

As a textbook of pathology for the student and practitioner, it can be highly recommended, but because of the sacrifices for brevity it is not recommended for the specialist.

J. J. C.

**OPHTHALMOLOGY, GIFFORD'S TEXTBOOK OF.** By Francis H. Adler, M.D., Professor of Ophthalmology, University of Pennsylvania Medical School. Fourth Edition. Illustrated. Philadelphia and London. W. B. Saunders Company. 1947. Price \$6.00.

This is so completely different from Gifford's textbook that there seems to be little reason for attaching his name to it. Dr. Adler's reputation is illustrious enough for the book to have been published in his name alone.

As might be expected of a physiologist, Dr. Adler has devoted more than the average amount of space to physiologic processes, both normal and pathologic. Considerable detail is presented on the visual pathways, and fifty pages are devoted to disturbances of ocular motility. This seems to be excessive considering the general scope of the book. On the other hand, methods of refraction and surgical procedures have been minimized, which is fitting in a text not written for the specialist. The chapters on "Ocular Manifestations of General Disease" and on "Ocular Disorders Due to Diseases of the Central Nervous System" are especially valuable.

The illustrations are excellent, but the number of colored pictures has been reduced.

In summary, it may be said that this is an excellent reference book for the undergraduate student and general practitioner, but that it will be of even more value to the postgraduate beginning his study of the specialty.

W. R. E.



# *Make Reservations Early*

## **HOTEL RESERVATIONS**

*for*

**91st Annual Session, Kansas City**

**March 27, 28, 29, 30, 1949**

*Members are requested to make reservations directly with  
the hotel of their choice.*

In case of difficulty concerning reservation, contact the Committee on Hotels: DRS.  
JAMES W. DOWNEY, *Chairman*; MARTIN P. HUNTER, DAVID B. MORGAN, R. C. FREDEEN,  
EDWARD H. KLEIN, ROBERT J. MURPHY, M. L. FRIEDMAN, ROBERT A. MOORE.

**President Hotel, 14th and Baltimore**

*(Headquarters, Missouri State Medical  
Association)*

Single room \$3.50 to \$5.50; double \$5.00 to  
\$7.50; twin bedded room \$7.00 to \$9.00.

**Muehlebach Hotel, 12th and Baltimore**

Single room \$4.00 to \$8.00; double \$6.00 to  
\$10.00; twin bedded room \$7.00 to \$12.00.

**Ambassador Hotel, Broadway and  
Knickerbocker**

Single room \$2.50 to \$5.00; double \$3.50 to  
\$7.00; twin bedded room \$4.50 to \$8.00.

**Bellerive Hotel, 214 E. Armour**

Single room \$4.50 to \$6.00; double \$6.50 to  
\$9.00; twin bedded room \$6.50 to \$9.00.

**Commonwealth Hotel, 11th and Baltimore**

Single room \$3.00 to \$4.00; double \$4.00 to  
\$6.00; twin bedded room \$4.50 to \$7.00.

**Continental Hotel, 11th and Baltimore**

Single room \$3.00 to \$5.00; double \$4.50 to  
\$6.00; twin bedded room \$6.00 to \$9.00.

**Phillips Hotel, 12th and Baltimore**

Single room \$3.00 to \$5.00; double \$5.00 to  
\$8.00; twin bedded room \$7.00 to \$8.00.

**Pickwick Hotel, 10th and McGee**

Single room \$3.25 to \$5.00; double \$4.75 to  
\$7.00; twin bedded room \$5.50 to \$7.00.

**THE STOKES SANITARIUM** 923 Cherokee Road, Louisville, Kentucky

Our **ALCOHOLIC** treatment destroys the craving, restores the appetite and sleep, and rebuilds the physical and nervous condition of the patient. Liquors withdrawn gradually; no limit on the amount necessary to prevent or relieve delirium.

**MENTAL** patients have every comfort that their home affords.

The **DRUG** treatment is one of gradual Reduction. It relieves the constipation, restores the appetite and sleep; withdrawal pains are absent. No Hyoscine or rapid withdrawal methods used.

**NERVOUS** patients are accepted by us for observation and diagnosis as well as treatment.

E. W. STOKES, Medical Director. Established 1904  
Telephone—Highland 2101

Buy  
U. S. Saving  
Bonds

## A GUARANTEED INCOME For Professional Men Against Disability

Due to Accidents, Sickness, Total Disability

Accidental Death and Loss of Hands, Feet or Eyes

**NO CANCELLATION CLAUSE** (Standard Provision No. 16)

**NO TERMINATING AGE** (Standard Provision No. 20)

**& GUARANTEED RENEWABLE FEATURES PROVIDED**

### FIRST DAY TO LIFETIME BENEFITS

**DISABILITIES OCCURRING PRIOR TO AGE 60**

Accidents or Confining Sickness

*When Hospital Confined*

\$ 800 first month benefit

\$1000 second month benefit

\$1000 third month benefit

*When Not Hospital Confined*

\$400 monthly 1st year (\$200 1st month)

\$400 monthly 2nd year

\$300 monthly thereafter for life

**DISABILITIES OCCURRING AFTER AGE 60**—\$100 less 1st year after 1st month and \$150 less thereafter exclusive of Hospital Benefits.

**Non Pro-Rating**

**Non-Assessable**

**Non-Aggregate**

## CONTINENTAL CASUALTY COMPANY

PROFESSIONAL GROUP DEPT., *Intermediate Division*

30 E. ADAMS, CHICAGO 3, ILL.



## The Mary E. Pogue School

Complete facilities for training Retarded and Epileptic children educationally and socially. Pupils per teacher strictly limited. Excellent educational, physical and occupational therapy programs.

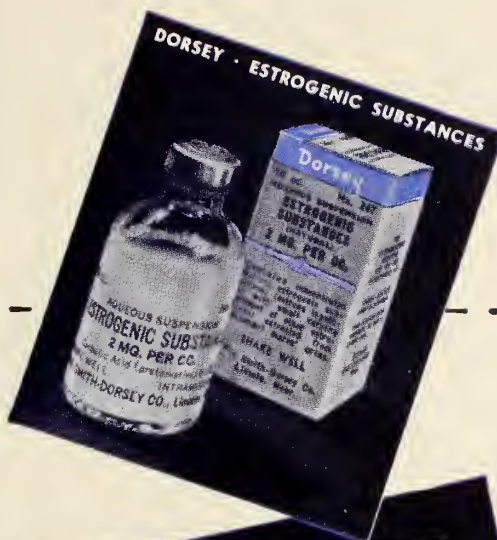
Recreational facilities include riding, group games, selected movies under competent supervision of skilled personnel.

Catalogue on request.

G. H. Marquardt, M.D. Barclay J. MacGregor  
Medical Director Registrar

27 Geneva Road, Wheaton, Illinois  
(Near Chicago)





ANNOUNCING  
*Council Acceptance*

AQUEOUS SUSPENSION OF ESTROGENIC SUBSTANCES—DORSEY ... Highly purified Estrogenic Substances derived from natural sources evenly suspended for uniform dosage. Available in 20,000 I. U. per cc.—10 cc. rubber capped vials and 1 cc. sealed ampoules.

AMINOPHYLLINE SUPPOSITORIES—DORSEY ... Aminophylline in a water soluble base, made for ready solubility in the rectum at body temperature. No need for refrigeration. Available in 0.5 gm. suppositories—boxes of 12

**THE SMITH-DORSEY COMPANY**  
Lincoln, Nebraska  
BRANCHES AT DALLAS AND LOS ANGELES

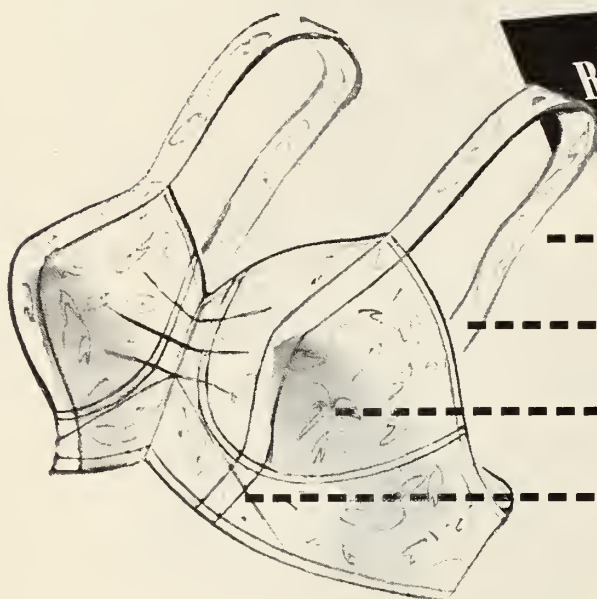


MANUFACTURERS OF  
AQUEOUS SUSPENSION OF ESTROGENIC SUBSTANCES • DORSEY  
AMINOPHYLLINE SUPPOSITORIES • DORSEY

*an aid in treatment of specific breast conditions*

# Lov-e' CORRECTIVE BRASSIERES

*are custom-fitted to prescription...*



## BASIC LOV-E' FITTING TECHNIQUE

- Straps adjusted for maximum comfort with gentle-yet-firm support.
- Back width designed to encourage good posture.
- Correct bust cup selected for proper uplift and separation.
- Torso fitted to patient's personal measurements.

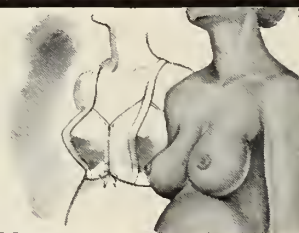
Proper physiological support for the breast is a medical problem, and patients are grateful to the physician who recognizes this fact. Lov-e's extensive therapeutic line of breast supports provides remedial support for specific breast conditions. From more than 500 bust-cup-torso size variations, the patient's correct size is selected, then fitted to her *individual measurements* by specially trained Lov-e' technicians, according to your exact instructions.

*Lov-e' Brassieres are available in a wide variety of all fine fabrics including cottons, rayon jacquards and nylons. Also available: sleeping brassieres, hospital binders, artificial breasts, muscle pads and maternity garter supports.*

LOV-E SECTION  
CORSET DEPARTMENT  
FAMOUS-BARR CO., ST. LOUIS

### MATERNITY

— for pre-natal and post-natal. Helps prevent leakage. Adjusted without charge during pregnancy.



### HYPERTROPHIC

— inner pocket for pendulous bust. Built up back. Padded shoulder straps. Redistributes bust weight.



### MASTECTOMY

— fitted with Lov-e' bust pads to restore bust contour. Aids psychologically.







**GOSSARD**  
FRONT LACING  
**CORSETS**  
*A complete line of  
sizes and types.*  
*Expert Fitters*  
**THE W. E. ISLE COMPANY**  
1121 GRAND • KANSAS CITY, MO.  
ENTIRE SECOND FLOOR VICTOR 2350

## Mullen Ambulance Company

PRIVATE AMBULANCE  
SERVICE

*Local and Distant Trips  
Day or Night*

5159 Delmar, St. Louis

Forest 1913

The Neurological Hospital,  
2625 The Paseo, Kansas City,  
Missouri. Operated by the Rob-  
inson Clinic, for the care and  
treatment of nervous and men-  
tal patients and associated  
conditions.

## FAITH HOSPITAL

A. J. Signorelli, M.D., *Medical Director*

2800 N. Taylor

St. Louis, Mo.

GOodfellow 6262



One of Four Main Buildings

## GLENWOOD SANATORIUM

A Private Hospital for Care of Nervous and Mental Disorders, Alcohol and Narcotic Addictions.

Thoroughly equipped for all the approved therapeutic measures. Insulin, metrazol and electro shock used in selected cases.

Four main buildings for patients permit ample classification facilities. Large grounds composed of about fifty acres make many out-of-door activities possible.

Phone WEbster 1056

Visiting Consultant  
W. W. Graves, M.D.

Visiting Neuropsychiatrist  
Sydney B. Maughs, M.D.

Medical Superintendent  
Paul Hines, M.D.

Resident Physicians  
Richard J. Hessberg, M.D.  
LeRoy J. Dierker, M.D.

*For full information, address*

Paul Hines, M.D., Medical Superintendent, Webster Groves, St. Louis, 19, Mo.



**THIS IS HARD**



**BUT THIS IS EASY**



**AND THIS IS  
MIGHTY WONDERFUL**

SURE, you believe in saving.

But it's hard to take cash out of your pocket, time out of your day, to do it regularly.

The sure way, the *easy* way to do your saving is to get started on an *automatic* savings plan with U. S. Savings Bonds. Like this . . .

**1. If you're on a payroll**, sign up in the Payroll Savings Plan, then forget it. From then on the money saves itself—so much per week, or so much per month.

**2. If you're not on a payroll**, sign up at your bank for the Bond-A-Month Plan. You decide how much to put into bonds, your bank does the rest.

In just ten years after you start buying bonds, your money starts coming back to you —\$4 for every \$3 you put in.

**And remember**—any time you need your money for emergencies, you can get it back in minutes without losing interest.

**Automatic saving is sure saving—U.S. Savings Bonds**

*Contributed by this magazine in co-operation with the Magazine Publishers of America as a public service.*



**339-C**



# HIGH...WIDE...and Council-Accepted

## Caminoids\*

TRADEMARK

BRAND OF AMINOPEPTODRATE

*For Oral Administration*

**HIGH** biological value—Contains all of the recognized essential amino acids . . . derived from extracted liver and beef muscle, wheat gluten, soya, yeast, casein, and lactalbumin. One tablespoonful t.i.d. provides 12 Gm. protein as hydrolysate.

**WIDE** patient-acceptance—Notable palatability and adaptability to a variety of vehicles assure adherence to prescribed regimen.



Supplied: Bottles containing 6 oz.; 1-lb., 5-lb., and 10-lb. containers.

\*New designation of Aminoids adopted as a condition of acceptance by the Council on Pharmacy and Chemistry of the American Medical Association. The word Caminoids is an exclusive trademark of The Arlington Chemical Company.

*Arlington*

THE ARLINGTON CHEMICAL COMPANY • YONKERS 1, NEW YORK



## North Shore Health Resort

Winnetka, Illinois

*on the Shores of  
Lake Michigan*

A completely equipped sanitarium for the care of nervous and mental disorders, alcoholism and drug addiction offering all forms of treatment, including electric shock.

SAMUEL LIEBMAN, M.S., M.D.

225 Sheridan Road

Medical Director

Phone Winnetka 211

## COMMERCIAL ANNOUNCEMENT

**WANTED:** M. D. trained in Obstetrics and Pediatrics to join new clinic now being organized—central Iowa town of 7,500—new air conditioned ground floor offices. Address Box 163, Missouri State Medical Association, 623 Missouri Bldg., St. Louis 3, Mo.

**WANTED:** A Doctor to practice in Diamond, Mo. Hospital for sale or lease. No doctor in town. Call or write Rex Beyer, Diamond, Mo. Phone 84.

Hair Permanently Removed by Electrolysis

**DOROTHY WORRELL, R.N.**

**233 N. Vandeventer, St. Louis**

**Telephone, Jefferson 9436**

*Work Done on Prescription of Physicians Only*



**LABORATORY C&B REAGENTS**

**Inorganic and Organic Chemicals**  
**Biological Stains • Solutions**  
**Chemical Indicators • Test Papers**

*Distributed by*  
**Physician and Laboratory Supply Houses**

**The COLEMAN & BELL COMPANY, Inc.**  
MANUFACTURING CHEMISTS NORWOOD, OHIO, U.S.A.

**COLEMAN & BELL** *Norwood, Ohio*

*All worth while laboratory examinations; including—*

Tissue Diagnosis

The Wassermann and Kahn Tests

Blood Chemistry

Bacteriology and Clinical Pathology

X-Ray including Gastro-Intestinal Study and Gall Bladder Visualization

Basal Metabolism

Pregnancy Test

Electrocardiograms with interpretation

## National Pathological Laboratory

**RALPH L. THOMPSON, M.D., Director**

**601-616 University Club Bldg.**

**ST. LOUIS**

Telephone Jefferson 6088

This Laboratory is approved by the Council on Medical Education and Hospitals of the American Medical Association

## INDEX TO ADVERTISERS

Abbott Laboratories .....	141
Ames Company, Inc. ....	121
Ar-Ex Cosmetics, Inc. ....	86
Arlington Chemical Co. ....	153
Ayerst, McKenna & Harrison, Ltd. ....	135
Bilhuber-Knoll Corp. ....	84
Borden Company .....	127
Camel Cigarettes .....	82, 83
Camp, S. H., & Co. ....	76
Canada Dry Ginger Ale, Inc. ....	131
Chicago Medical Society .....	123
Coleman & Bell Co. ....	154
Continental Casualty Co. ....	148
Cook County Graduate School of Medicine .....	131
Cosmo-Cautery Company .....	113
Duncan Laboratories .....	143
Eaton Laboratories .....	155
Faith Hospital .....	151
Glenwood Sanatorium .....	151
Gradwohl Laboratories .....	90
Hamilton-Schmidt .....	86
Hanger, J. E., Inc. ....	90
Isle, W. E., Co. ....	151
Lederle Labs .....	119
Lilly, Eli & Co. ....	Insert
Lov-e Brassiere Co. ....	150
Major Clinic .....	77
Mead Johnson & Co. ....	156
Medical Protective Co. ....	86
Milwaukee Sanitarium .....	123
Mullen Ambulance .....	151
National Pathological Laboratories .....	154
Norbury Sanatorium .....	84
North Shore Health Resort.....	153
Parke, Davis & Co. ....	74, 75
Physicians Casualty Assn. ....	131
Pogue, Mary E., School .....	148
Producers Creamery Co. ....	137
Quincy X-Ray & Radium Labs. ....	86
Ralph Sanitarium .....	88
Robinson Clinic, Inc. ....	151
Schering Corporation .....	109
Schmid, Julius, Inc. ....	114
Searle, G. D., & Co. ....	105
Smith-Dorsey Co. ....	149
Smith, Kline & French Labs. ....	81
Squibb, E. R. & Sons .....	79
Stokes Sanitarium .....	148
Swift & Company .....	106
Upjohn Company .....	89
U. S. Brewers Foundation, Inc. ....	137
U. S. Savings Bond .....	152
Wallace Sanitarium .....	90
Wander Company .....	85
Winthrop-Stearns, Inc. ....	87
Worrell, Dorothy .....	154



For surface infections . . .



*Although burned tissues supply an excellent medium for bacterial growth, infection may be minimized by the prompt, topical application of an efficient antibacterial agent. For this purpose, fine-mesh gauze strips impregnated with Furacin Soluble Dressing may be used. The effectiveness of Furacin in combatting mixed infections of burns without delay of healing has been well demonstrated.\** Furacin N.N.R., brand of nitrofurazone, is available as Furacin Soluble Dressing and as Furacin Solution, both containing 0.2 per cent Furacin.® These preparations are indicated for topical application *in the prophylaxis and treatment of infections of wounds, second and third degree burns, cutaneous ulcers, pyodermas and skin grafts.* Literature on request.

EATON LABORATORIES, INC., NORWICH, N. Y.

\*Snyder, M. L., Kiehn, C. L. and Christopherson, J. W.: *Mil. Surgeon*, 97: 380, 1945. • Shipley, E. R. and Dodd, M. C.: *Surg., Gynec. & Obst.*, 84: 366, 1947 • Mays, J. L.: *J. Med. Assoc. Georgia*, 36: 263, 1947. • Curtis, L.: *Surg. Clin. N. America*, 1466 (Dec.) 1947.

COPYRIGHT 1947  
MEAD JOHNSON & CO.  
EVANSVILLE, IND., U.S.A.

1/2 LB. NET (227 GM.)

# PABENA

*Oatmeal Enriched  
with vitamin and mineral supplements  
thoroughly cooked and dried*

Pabena consists of oatmeal, malt syrup, powdered cereals, specially prepared for human use, sodium chloride, powdered yeast, and reduced iron. Pabena furnishes vitamin B complex, including thiamine, and nutritionally important minerals (iron, copper, calcium, and phosphorus). As a result of thorough cooking and drying, Pabena is easily digested. It is palatable, convenient to prepare, economical to use.

REQUIRES NO COOKING • Add milk or water, hot or cold. Serve with milk or cream.

MEAD JOHNSON & CO.  
EVANSVILLE, IND., U.S.A.



# THE JOURNAL

*of the*  
MISSOURI STATE MEDICAL ASSOCIATION

VOLUME 46  
NUMBER 3

MARCH, 1949

SINGLE COPY, 40 CENTS  
PER YEAR, \$3.00

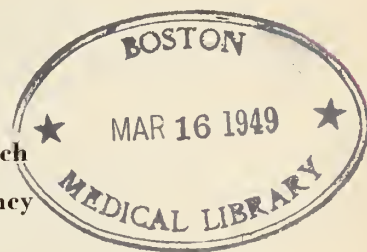
## ORIGINAL ARTICLES

Massive Hemorrhage From Carcinoid of the Stomach

Spontaneous Rupture of the Uterus in Late Pregnancy  
Accompanied by Placenta Accreta

Glutamic Acid in the Treatment of Mentally Handicapped Children

Surgical Management of Cancer Patients



## EDITORIALS

Annual Session

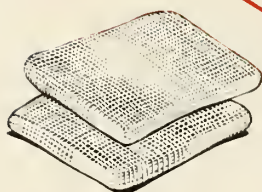
Program of A. M. A.

"Buy British"

*(Contents Index Page 161)*

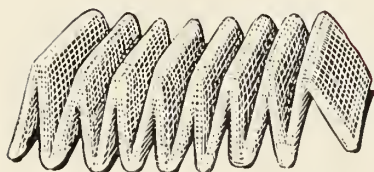
ANNUAL SESSION, MARCH 27-30, 1949

# a *refinement*



## *hemostatic*

Promptly and effectively controls bleeding;



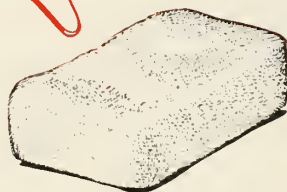
## *absorbable*

Completely absorbed from various types of tissue;



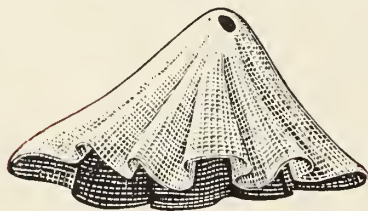
## *convenient*

Requires no cumbersome preparatory procedures;  
applied directly to bleeding surfaces as it comes  
from the container;



## *practical*

Pliable; easy to apply; conforms readily  
to wound surfaces;



## *versatile*

Available in forms adaptable to a maximum of uses.

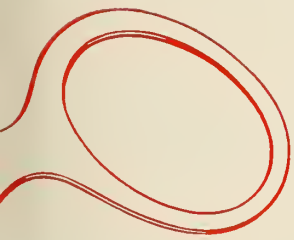
PARKE, DAVIS & COMPANY



# n surgical technic

# OXYCEL<sup>®</sup>

## *hemostasis*



In general surgery and in the specialized branches of surgery OXYCEL (oxidized cellulose, Parke, Davis & Company) aids the operator by stopping bleeding not readily controllable by clamp or ligature. This refinement in surgical technic is made possible by the distinctive features of OXYCEL.

#### PACKAGE INFORMATION

OXYCEL is supplied in individual screw-capped bottles.

**OXYCEL PADS (Gauze Type)** Sterile 3" x 3" eight-ply pads.

**OXYCEL STRIPS (Gauze Type)** Sterile 18" x 2" four-ply strips, pleated in accordion fashion.

**OXYCEL PLEDGETS (Cotton Type)** Sterile 2¼" x 1" x 1" portions.

**OXYCEL FOLEY CONES** Sterile four-ply gauze-type discs of 5" or 7" diameter folded in radially fluted form, used in prostatectomy.

DETROIT 32, MICHIGAN



# MORE AND MORE...



## ETHICALLY PRESCRIBED

Koromex Jelly and Koromex Cream are the companion products prepared by a medically accepted manufacturer incorporating all of these particularly valuable features... A uniformity in pH 4.5, consistent with normal vaginal fluids... spermicidal times less than 3 minutes... bacteriostatic oxyquinoline benzoate... Contain de-ionized water to assure maximum freedom from impurities usually present in ordinary water, thereby eliminating possible unfavorable chemical reaction.

ACTIVE INGREDIENTS: BORIC ACID 2.0%, OXYQUINOLIN BENZOATE 0.02% AND PHENYLMERCURIC ACETATE 0.02%, IN SUITABLE JELLY OR CREAM BASES.

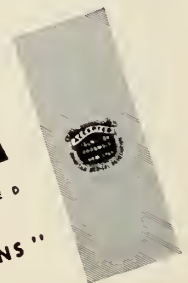
FOR MORE COMPREHENSIVE DATA PLEASE SEND FOR AVAILABLE PROFESSIONAL LITERATURE.



# KOROMEX

TRADE MARK REGISTERED

"CHOICE OF PHYSICIANS"



HOLLAND-RANTOS COMPANY, INC., 145 HUDSON STREET, NEW YORK 13, N. Y.  
MERLE L. YOUNGS • PRESIDENT



# CONTENTS

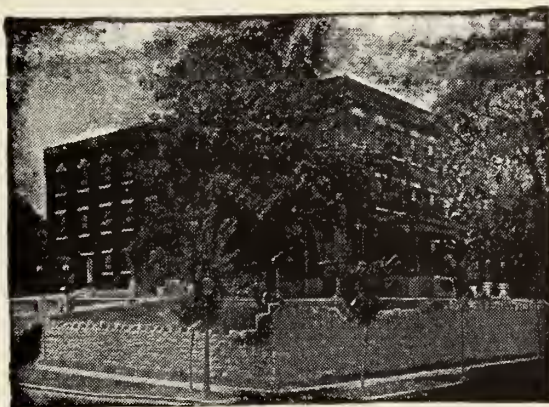
Massive Hemorrhage from Carcinoid of the Stomach. Victor E. Scherman, M.D., Mas Hara, M.D., and Harold F. Trafton, M.D., St. Louis, Mo.....	175	Program of the American Medical Association for the Advancement of Medicine and Public Health .....	195
Spontaneous Rupture of the Uterus in Late Pregnancy Accompanied by Placenta Accreta. Milton H. Meyerhardt, M.D., St. Louis, Mo.....	177	"Buy British" .....	196
Glutamic Acid in the Treatment of Mentally Handicapped Children. Roger W. Clapp, M.D., St. Louis, Mo.....	181	News Notes.....	196
Surgical Management of Cancer Patients. H. M. Wiley, M.D., and Everett M. Sugarbaker, M.D., Jefferson City, Mo.....	182	Musings of the Field Secretary.....	199
President's Page .....	194	Deaths .....	200
Editorials—		Organization Activities.....	200
Annual Session.....	195	Miscellany .....	220
		Financial Statement for 1948.....	224
		Society Proceedings.....	230
		Book Reviews .....	230
		Commercial Announcement.....	234

Entered as Second Class Matter, February 18, 1925, at the Post Office at Fulton, Mo., under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1003, Act of October 3, 1917, authorized July 30, 1918. Business Office, 1201-5 Bluff St., Fulton, Mo., and 623 Missouri Building, St. Louis, Mo., Editorial Office, 623 Missouri Building, St. Louis, Mo. Return postage guaranteed. Printed by The Ovid Bell Press, Inc., Fulton, Mo.

## THE MAJOR CLINIC ASSOCIATION

3100 Euclid Avenue, Kansas City, Missouri

A Well  
Equipped  
Institution  
for the  
Treatment of  
Nervous and  
Mental  
Diseases and  
Alcohol,  
Drug and  
Tobacco  
Addictions



Beautiful  
Location  
Large, Well  
Shaded  
Grounds,  
Spacious  
Porches,  
All Modern  
Methods for  
Restoring  
Patients to a  
Normal  
Condition

HERMON S. MAJOR, M.D.  
Medical Director

HERMON S. MAJOR, JR.  
Business Manager

**AMERICAN MEDICAL ASSOCIATION**

President, Roscoe L. Sensenich, South Bend, Ind.

President-Elect, Ernest Edward Irons, Chicago.

**Annual Session, Atlantic City, June 6-10, 1949****MISSOURI STATE MEDICAL ASSOCIATION****91st Annual Session, Kansas City, March 27-30, 1949**

President, Robert Mueller, St. Louis.  
 President-Elect, Wallis Smith, Springfield.  
 Vice Presidents, B. E. DeTar, Joplin; D. P. Dyer, Sedalia;  
 P. W. Jennings, Canton.  
 Speaker, Ralph E. Duncan, Kansas City; Vice Speaker,  
 F. T. H'Doubler, Springfield.  
 Treasurer, C. E. Hyndman, St. Louis.  
 Secretary, W. A. Bloom, Fayette.  
 Editor, G. V. Stryker, St. Louis.  
 Secretary-Editor Emeritus, R. L. Thompson, St. Louis.  
 Field Secretary, Raymond McIntyre, St. Louis.  
 Assistant Editor-Business Manager, Helen Penn, St. Louis.  
 Executive Secretary, Tom R. O'Brien, 623 Missouri Bldg.,  
 St. Louis.

**Delegates to the American Medical Association**

W. L. Allee, Eldon, 1948-1950; alternate, Paul Baldwin, Kennett.  
 Howard B. Goodrich, Hannibal, 1948-1950; alternate, H. L. Mantz, Kansas City.  
 James R. McVay, Kansas City, 1947-1949; alternate, A. J. Campbell, Sedalia.  
 R. E. Schlueter, St. Louis, 1947-1949; alternate, F. G. Pernoud, St. Louis.

**Standing Committees**

**Scientific Work**—W. A. Bloom, Fayette, Chairman; A. N. Arneson, St. Louis (1951); Rex L. Diveley, Kansas City (1949).  
**Associate Members**—Victor B. Buhler, Kansas City; W. J. Stewart, Columbia; Raymond O. Muether, St. Louis.

**Postgraduate Course**—Raymond O. Muether, St. Louis, Chairman (1951); Edward Massie, St. Louis (1951); Guy D. Callaway, Springfield (1950); M. Pinson Neal, Columbia (1949); Hubert Parker, Kansas City (1949).

**Publication**—G. V. Stryker, St. Louis, Chairman; V. T. Williams, Kansas City; H. E. Petersen, St. Joseph; Fred R. Farthing, Springfield.

**Public Policy and Public Relations**—F. R. Crouch, Farmington (1951); Armand D. Fries, St. Louis (1949); Howard B. Goodrich, Hannibal (1951); John Growdon, Kansas City (1950).  
**Associate Member**—Cyril W. Schumacher, St. Louis.

**Defense**—Charles E. Hyndman, St. Louis, Chairman (1951); Roland S. Kieffer, St. Louis (1950); L. F. Heimbarger, Springfield (1950); O. B. Zeinert, St. Louis (1949); L. P. Forgrave, St. Joseph (1949).

**Medical Education and Hospitals**—Dudley S. Conley, Columbia, Chairman (1949); John S. Knight, Kansas City (1951); F. T. H'Doubler, Springfield (1950); F. L. Kneibert, Poplar Bluff (1949).

**Cancer**—E. C. Ernst, St. Louis, Chairman (1950); E. Kip Robinson, Kansas City (1951); Everett Sugarbaker, Jefferson City (1951); William E. Leighton, St. Louis (1949); Paul F. Cole, Springfield (1949).

**Medical Economics**—Carl F. Vohs, St. Louis, Chairman (1950); Morris S. Harless, Kansas City (1951); C. T. Herbert, Cape Girardeau (1951); George A. Aiken, Marshall (1949); W. A. Bloom, Fayette (1949).

**Mental Health**—E. F. Hoctor, Farmington, Chairman (1951); Paul Hines, St. Louis (1950); Orr Mullinax, Jefferson City (1950); B. Landis Elliott, Kansas City (1949); Frank M. Grogan, St. Louis (1949).

**Maternal Welfare**—E. Lee Dorsett, St. Louis, Chairman (1949); J. L. Johnston, Springfield (1951); E. E. Wadlow, St. Joseph (1950); J. Milton Singleton, Kansas City (1950); Paul F. Fletcher, St. Louis (1949).

**Infant Care**—G. V. Herrman, Kansas City, Chairman (1951); Eugene Schwartz, Springfield (1951); H. E. Petersen, St. Joseph (1950); Peter G. Danis, St. Louis (1949); Park J. White, St. Louis (1949).  
**Associate Member**—Joseph C. Jaudon, St. Louis.

**Health and Public Instruction (McAlester Foundation)**—A. W. McAlester, III, Kansas City, Chairman (1950); M. K. Underwood, Rolla (1951); B. E. DeTar, Joplin (1951); Joseph Conrad, Chillicothe (1950); Grayson Carroll, St. Louis (1949).

**Constitution and By-Laws**—B. Landis Elliott, Kansas City, Chairman (1950); J. H. Summers, Lebanon (1951); John J. Hammond, St. Louis (1950); S. R. McCracken, Excelsior Springs (1949).

Year indicates expiration of term.

**Fractures**—Daniel L. Yancey, Springfield, Chairman (1949); W. J. Stewart, Columbia (1951); N. S. Pickard, Kansas City (1951); W. R. Bohné, St. Louis (1950); J. Albert Key, St. Louis (1950).  
**Associate Members**—Jacob Kulowski, St. Joseph; E. L. Murphy, Hannibal.

**Conservation of Eyesight**—C. Souter Smith, Springfield, Chairman (1949); Robert Mattis, St. Louis (1951); A. N. Lemoine, Kansas City (1950); C. P. Dyer, St. Louis (1950); Robert S. Minton, St. Joseph (1949).  
**Associate Members**—Winfred L. Post, Joplin; Philip Luedde, St. Louis; John McLeod, Kansas City; G. J. Tygett, Cape Girardeau; S. L. Freeman, Kirksville; H. B. Stauffer, Jefferson City; S. Albert Hanser, St. Louis; Anton J. Hummel, St. Louis.

**Control of Venereal Disease**—A. W. Neilson, St. Louis, Chairman (1949); W. S. Sewell, Springfield (1951); Charles Greenberg, St. Joseph (1950); Hugh L. Dwyer, Kansas City (1950).

**Industrial Health**—V. T. Williams, Kansas City, Chairman (1951); Horace F. Flanders, Kansas City (1951); E. M. Fessenden, St. Louis (1950); A. M. Ziegler, Kansas City (1949); Charles R. McAdam, St. Louis (1949).  
**Associate Members**—Richard A. Sutter, St. Louis; H. M. Roebber, Bonne Terre.

**Anesthesiology**—Joseph McNearney, St. Louis, Chairman; O. T. Blanke, Joplin; J. J. Merz, St. Louis; Peter DeMaria, Kansas City; Charles White, Kansas City.

**Special Committees**

**Physical Medicine**—F. Garrett Pipkin, Kansas City (1951); Emmett Settle, Rock Port (1950); A. J. Kotkis, St. Louis (1949); John L. Washburn, Versailles (1949).

**Tuberculosis**—E. E. Glenn, Springfield, Chairman; A. C. Henske, St. Louis; Lawrence E. Wood, Kansas City; J. L. Mudd, St. Louis; Paul Murphy, St. Louis; C. A. Brashear, Mt. Vernon; Wilbur P. McDonald, St. Joseph; I. J. Flance, St. Louis; Florence E. MacInnis, Kansas City.

**Study of Cardiac Diseases**—A. Graham Asher, Kansas City, Chairman (1949); Drew Luten, St. Louis (1951); A. M. Estes, Jackson (1951); Julius Jensen, St. Louis (1950); Horace W. Carle, St. Joseph (1949).  
**Associate Members**—J. William Fleming, Jr., Moberly; Glen W. Hendren, Liberty; C. Braxton Davis, Nevada; Arthur Strauss, St. Louis.

**Rural Medical Service**—R. W. Kennedy, Marshall, Chairman; E. C. Bohrer, West Plains; Paul Baldwin, Kennett; H. E. Petersen, St. Joseph; Wallis Smith, Springfield.  
 W. A. Bloom, Fayette; W. F. Francka, Hannibal; J. F. Jolley, Mexico; A. L. Hensen, Appleton City; George W. Newman, Cassville; A. S. Bristow, Princeton.

**COUNCILOR DISTRICTS AND COUNTIES IN EACH DISTRICT\***

J. W. THOMPSON, St. Louis, Chairman

E. C. BOHRER, West Plains, Vice Chairman

**First District:** Councilor, H. E. Petersen, St. Joseph. Counties: Andrew, Atchison, Buchanan, Caldwell, Carroll, Clay, Clinton, Daviess, De Kalb, Gentry, Grundy, Harrison, Holt, Livingston, Mercer, Nodaway, Platte, Ray, Worth.

**Second District:** Councilor, W. F. Francka, Hannibal. Counties: Adair, Chariton, Clark, Knox, Lewis, Linn, Macon, Marion, Monroe, Pike, Putnam, Ralls, Randolph, Schuyler, Scotland, Shelby, Sullivan.

**Third District:** Councilor, J. William Thompson, St. Louis: St. Louis City.

**Fourth District:** Councilor, Otto W. Koch, Clayton. Counties: Franklin, Jefferson, Lincoln, St. Charles, St. Louis County, Warren.

**Fifth District:** Councilor, J. F. Jolley, Mexico. Counties: Audrain, Boone, Callaway, Camden, Cole, Cooper, Gasconade, Howard, Maries, Miller, Moniteau, Montgomery, Morgan, Osage.

**Sixth District:** Councilor, R. W. Kennedy, Marshall. Counties: Bates, Benton, Cass, Cedar, Henry, Johnson, Lafayette, Pettis, St. Clair, Saline, Vernon.

**Seventh District:** Councilor, Edgar C. Virden, Kansas City. County: Jackson.

**Eighth District:** Councilor, W. S. Sewell, Springfield. Counties: Barry, Barton, Christian, Dade, Dallas, Greene, Hickory, Jasper, Lawrence, McDonald, Newton, Polk, Stone, Taney, Webster.

**Ninth District:** Councilor, Eldon C. Bohrer, West Plains. Counties: Carter, Crawford, Dent, Douglas, Howell, Laclede, Oregon, Ozark, Phelps, Pulaski, Ripley, Shannon, Texas, Wright.

**Tenth District:** Councilor, Frank W. Hall, Cape Girardeau. Counties: Bollinger, Butler, Cape Girardeau, Dunklin, Iron, Madison, Mississippi, New Madrid, Pemiscott, Perry, Reynolds, St. Francois, Ste. Genevieve, Scott, Stoddard, Washington, Wayne.

Counties in italics are not organized.





*During  
Pregnancy*  
**SALT  
WITHOUT  
SODIUM**

Water retention (excessive gain in weight—pitting edema) is quite common in pregnancy. Sodium, particularly if used excessively, accelerates this process. Vice versa, sodium restriction can prevent water retention.

Neocurtasal, completely sodium free salt, palatably seasons low sodium diets. Neocurtasal looks, tastes, and is used like ordinary table salt. Available in convenient 2 oz. shakers and 8 oz. bottles.

**NEOCURTASAL®**

*Winthrop-Stearns* INC.  
NEW YORK 13, N. Y. WINDSOR, ONT.

# County Societies in Affiliation with the Missouri State Medical Association

COUNTY	DISTRICT	PRESIDENT	ADDRESS	SECRETARY	ADDRESS
Andrew	1	V. R. Wilson	Rosendale	M. L. Holliday	Fillmore
Audrain	5	Glen P. Kallenbach	Mexico	Fred Griffin	Mexico
Barton-Dade	8	Rudolf Knapp	Golden City	Vern T. Bickel	Lamar
Bates	6			John M. Cooper	Butler
Benton	6	T. S. Reser	Cole Camp	James A. Logan	Warsaw
Boone	5	James Baker	Columbia	Helen Yeager	Columbia
Buchanan	1	O. Earl Whitsell	St. Joseph	Joseph L. Fisher	St. Joseph
Butler	10	Frank E. Dinelli	Poplar Bluff	J. W. McPheeters, Jr.	Poplar Bluff
Caldwell-Livingston	1	Virgil D. Vandiver	Chillicothe	Charles M. Grace	Chillicothe
Callaway	5	R. B. Price	Fulton	R. N. Crews	Fulton
Camden	5	E. G. Claiborne	Camdenton	G. T. Myers	Macks Creek
Cape Girardeau	10	W. F. Oehler	Cape Girardeau	Charles F. Wilson	Cape Girardeau
Carroll	1	W. G. Atwood	Carrollton	John H. Platz	Carrollton
Carter-Shannon	9			W. T. Eudy	Eminence
Cass	6	Herbert A. Tracy	Belton	O. B. Barger	Harrisonville
Charlton-Macon-Monroe-Randolph	2	D. E. Eggleston	Macon	Henry K. Baker	Moberly
Clay	1	W. H. Goodson	Liberty	S. R. McCracken	Excelsior Springs
Clinton	1	Ronald E. Wilbur	Cameron	F. A. Santner	Lathrop
Cole	5	H. M. Wiley	Jefferson City	J. Paul Leslie	Jefferson City
Cooper	5			J. C. Tinchner	Boonville
Dallas-Hickory-Polk	8	C. H. Barnett	Bolivar	John R. O'Brien	Bolivar
De Kalb	1			W. S. Gale	Osborn
Dunklin	10	Quinton Tarver	Kennett	E. L. Spence	Kennett
Franklin	4	Herbert H. Schmidt	Marthasville	F. G. Mays	Washington
Greene	8	Daniel L. Yancey	Springfield	Kenneth E. Knabb	Springfield
Grundy-Daviess	1	Joseph M. Quisito	Trenton	E. A. Duffy	Trenton
Harrison	1	W. A. Broyles	Bethany		
Henry	6	S. B. Hughes	Clinton	R. S. Hollingsworth	Clinton
Holt	1	F. E. Hogan	Mound City	D. C. Perry	Mound City
Howard	5	Morris Leech	Fayette	Francis D. Dean	Fayette
Jackson	7	A. N. Altringer	Kansas City	Kenneth E. Cox	Kansas City
Jasper	8	Otto T. Blanke	Joplin	E. H. Hamilton	Joplin
Jefferson	4	Karl V. McKinstry	DeSoto	George Hopson	DeSoto
Johnson	6	O. H. Damron	Warrensburg	Reed T. Maxson	Warrensburg
Laclede	9	H. W. Carrington	Lebanon	B. B. Hurst	Lebanon
Lafayette	6	Douglas Kelling	Waverly	Jordan Kelling	Waverly
Lewis-Clark-Scotland	2	J. R. Bridges	Kahoka	P. W. Jennings	Canton
Lincoln	4	H. S. Harris	Troy	J. C. Creech	Troy
Linn	2	Roy R. Haley	Brookfield	J. R. Dixon	Brookfield
Marion-Ralls	2	H. L. Greene	Hannibal	M. J. Roller	Hannibal
Mercer	1	T. S. Duff	Cainsville	J. M. Perry	Princeton
Miller	5	G. D. Walker	Eldon	Carl T. Buehler, Jr.	Eldon
Mississippi	10	G. W. Whitaker	East Prairie	E. C. Rolwing	Charleston
Moniteau	5	K. S. Latham	California	L. L. Latham	California
Montgomery	5	E. J. T. Anderson	Montgomery City	S. J. Byland	Wellsville
Morgan	5	A. J. Gunn	Versailles	J. L. Washburn	Versailles
New Madrid	10	L. J. Smith	New Madrid	H. W. Carter	Portageville
Newton	8	H. C. Lentz	Neosho	J. A. Guthrie	Neosho
Nodaway-Atchison-Gentry-Worth	1	Emmett B. Settle	Rock Port	Charles D. Humbert	Barnard
North Central Counties Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam)	2	Spencer L. Freeman	Kirksville	John B. Jones	Kirksville
Ozarks Medical Society (Barry-Lawrence-Stone-Christian-Taney)	8	Fred Wommack	Crane	Kenneth Glover	Mt. Vernon
Pemiscot	10	C. C. Castles	Caruthersville	C. F. Cain	Caruthersville
Perry	10	J. J. Bredall	Perryville	L. W. Feltz	Perryville
Pettis	6	E. L. Rhodes	Sedalia	Carl D. Siegel	Sedalia
Phelps-Crawford-Dent-Pulaski	9	A. A. Drake	Rolla	M. K. Underwood	Rolla
Pike	2	Eugene Barrymore	Bowling Green	Charles H. Lewellen	Louisiana
Platte	1	L. C. Calvert	Weston	E. K. Langford	Platte City
Ray	1	L. D. Greene	Richmond		
St. Charles	4	J. M. Jenkins	St. Charles	Calvin Clay	St. Charles
St. Francois-Iron-Madison-Washington-Reynolds	10	S. C. Slaughter	Fredericktown	F. R. Crouch	Farmington
St. Genevieve	10	A. E. Sexauer	St. Genevieve	R. W. Lanning	St. Genevieve
St. Louis City	3	J. W. Thompson	St. Louis	S. J. Merenda	St. Louis
St. Louis	4	Paul R. Whitener	St. Louis	Robert C. Kingsland	St. Louis
Saline	6	James A. Reid	Marshall	Charles A. Veatch	Marshall
Scott	10	A. P. Sargent	Sikeston	E. D. Urban	Sikeston
Shelby	2	D. L. Harlan	Clarence		
South Central Counties Medical Societies (Howell-Oregon-Texas-Wright-Douglas)	9	Garrett S. Hogg, Jr.	Cabool	A. C. Ames	Mountain Grove
Stoddard	10	H. A. Harris	Bloomfield	W. C. Dieckman	Dexter
Vernon-Cedar	6	William H. Allen	Nevada	Rolla B. Wray	Nevada
Webster	8	C. R. Macdonnell	Marshfield	E. G. Beers	Seymour



# "CHANGE TO PHILIP MORRIS OR... CUT DOWN YOUR SMOKING!"

That is the suggestion of many of the country's  
leading specialists in cases of throat irritation.\*

Many doctors have among their patients  
some who they believe smoke too much. But the  
difficulty of persuading such smokers to cut down  
is familiar to everyone. What better advice  
therefore than "*Change to Philip Morris*"...the  
only leading cigarette proved definitely and  
measurably less irritating.

To minimize cigarette irritants, Philip Morris  
are made by a special process whose advan-  
tages are conclusively shown in published  
studies.\*\* These studies may convince you too  
that the most effective advice for patients who  
smoke is "*Change to Philip Morris*."



## PHILIP MORRIS

Philip Morris & Co., Ltd., Inc.  
119 Fifth Avenue, New York

**ARE YOU A PIPE SMOKER? . . .** We  
suggest an unusually fine new blend —  
**COUNTRY DOCTOR PIPE MIXTURE.** Made by  
the same process as used in the manu-  
facture of Philip Morris Cigarettes.

\*Completely documented evidence on file.

\*\*Reprints on request:

Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154; Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60;  
Proc. Soc. Exp. Biol. and Med., 1934, 32-241; N. Y. State Journ. Med., Vol. 35, 6-1-25, No. 11, 590-592.

*Conservative and Trustworthy . . .*

## DIGILANID

(crystalline complex of lanatosides A, B and C)

DIGILANID® gives the dependable action of the total glycosides present in *Digitalis lanata* whole leaf. DIGILANID may be regarded as a "crystalline whole leaf" preparation possessing advantages of stability, uniform potency and virtual freedom from impurities.

TABLET • LIQUID • AMPULS • SUPPOSITORY

*Originality • Elegance • Perfection*



**SANDOZ PHARMACEUTICALS**

Division of SANDOZ CHEMICAL WORKS, INC.

68-72 CHARLTON STREET • NEW YORK 14, N. Y.



## The Norbury Sanatorium

Established 1901—Incorporated—  
Licensed—Jacksonville, Illinois

• ALBERT H. DOLLEAR, B.S., M.D., Superintendent. FRANK GARM NORBURY, A.M., M.D., Medical Director. SAMUEL N. CLARK, M.D., Physician. HENRY A. DOLLEAR, M.D., Physician.



### Maplecrest

• Pictured above — Restful, congenial home-like surroundings are combined with the most modern diagnostic and therapeutic equipment.



### Maplewood

• Pictured at left — Most comfortable homes for individuals requiring rest, scientific diagnosis and treatment. Fireproof construction.



# MEAT...

## *In the Rational Weight Reduction Program*

One dictum is universally recognized in the planning of reducing diets: the basic requirements of good nutrition remain unaltered, and adequate amounts of high-quality protein are the cardinal factor in the successful dietary management of overweight.

Protein allowance in such a program is stated to be not less than 1.5 to 1.7 Gm. per Kg. of ideal body weight.<sup>1</sup> A further advantage of the diet high in protein and low in fat and carbohydrate is its greater simplicity; the tedious calculation of calories may be omitted without impairing the efficacy of the program.<sup>2</sup>

It is therefore recommended that lean meat be given a dominant role in reducing diets.<sup>1</sup>

The protein content of meat is notably high. Regardless of cut or kind, meat provides biologically complete protein able to satisfy the multiple amino acid needs of the body.

Lean meat, particularly, is of excellent digestibility. Its outstanding satiety value assures patient cooperation, a vital factor in the success of any weight reducing program.

---

<sup>1</sup> McLester, J. S.: Nutrition and Diet in Health and Disease, ed. 4, Philadelphia and London, W. B. Saunders Company, 1943.

<sup>2</sup> Kunde, M. M.: The Role of Hormones in the Treatment of Obesity, Ann. Int. Med. 28:971 (May) 1948.

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.



**A m e r i c a n   M e a t   I n s t i t u t e**  
Main Office, Chicago...Members Throughout the United States

# LUZIER'S SERVICE

Preparations by Luzier are selected to suit the individual's cosmetic requirements and preferences as determined by the answers to a Selection Questionnaire. They are made available to the public by Cosmetic Consultants who assist with the selection of suitable types, shades, and variations of Luzier preparations and suggest the manner of application to obtain the best results, the most desirable cosmetic effect.

Formulas may be had on written request and in specific cases, when there is a history or suspicion of allergy, materials are available for testing.

## Luzier's Fine Cosmetics and Perfumes Are Distributed in Missouri by

### CHILCUTT AND CHILCUTT, Divisional Distributors

Box 774, Jefferson City, Missouri

#### DISTRIBUTORS

**Pearl Jackson**  
510 Woodlawn  
Mexico, Mo.

**Bonnie Fox**  
722 S. Jefferson  
Springfield, Mo.

**Elva Gones**  
305½ W. 4th  
Hannibal, Mo.

**Verna Bell Prophet**  
338 Landers Bldg.  
Springfield, Mo.

### ALPHA EADE, Divisional Distributor

705 Olive Street, Room 511  
Phone GA 5347 St. Louis 1, Missouri

#### DISTRIBUTORS

**Mrs. Anna L. Brown**  
2317 Indiana Ave.  
St. Louis 4, Mo.  
Phone GR 2918

**Mrs. Betty H. Crain**  
5367 Gladstone  
Normandy 21, Mo.  
Phone GO 6714

**Mrs. Viola M. Dilg**  
426 Northridge  
St. Louis 15, Mo.  
Phone CO 7919

**Rose Miller**  
1121 Fullerton Bldg.  
122 N. 7th St.  
St. Louis 1, Mo.  
Phone GA 5335

**Laura B. Roberson**  
3412 Humphrey  
St. Louis 18, Mo.  
Phone LA 1833

**Mrs. Myrle C. Treanor**  
5974 Julian  
St. Louis 12, Mo.  
Phone DE 8067

### GLENN SANDERS, Divisional Distributor

4944 Murdock St.  
Phone Plateau 4442 St. Louis, Mo.

#### DISTRIBUTORS

**Blanche Becker**  
6502 Emma  
Jennings, Mo.  
Phone Mulberry 7712





even after **40**, a woman must do heavy work...

In the ranks of the mop and pail brigade many of the recruits are on the far side of forty. To those whose work is made doubly difficult by menopausal symptoms, "Premarin" may bring gratifying relief. The prompt remission of physical symptoms and the sense of well-being usually experienced following the use of "Premarin" can do much to restore normal efficiency . . . Other advantages of this naturally-occurring, conjugated estrogen are oral activity, comparative freedom from side-effects and flexibility of dosage... "Premarin" is available in tablets of four different potencies and in liquid form.



While sodium estrone sulfote is the principal estrogen in "Premarin," other equine estrogens...estrodial, equilin, equilenin, hippulin...are probably also present in varying amounts as water-soluble conjugates.

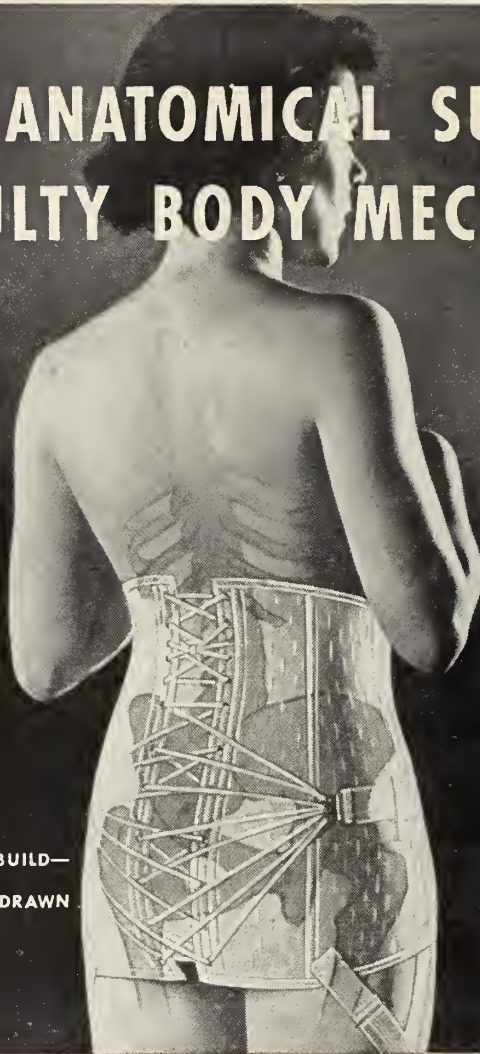
**"PREMARIN"**



ESTROGENIC SUBSTANCES (WATER-SOLUBLE)  
also known as CONJUGATED ESTROGENS (equine)

**Ayerst, McKenna & Harrison Limited** 22 East 40th Street, New York 16, New York  
4903

# CAMP ANATOMICAL SUPPORT FOR FAULTY BODY MECHANICS



PATIENT OF THIN TYPE OF BUILD—  
SKELETON INDRAWN

In conditions of faulty body mechanics, the nonuse of the abdominal muscles allows the pelvis to rotate downward and forward, bringing the sacrum up and back. There results an increased forward lumbar curve with the articular facets of the lumbar spine crowded together in the back.

The dorsal spine curves backward with compression of the dorsal intervertebral discs and the cervical spine curves forward with the articular facets in this region

closer together. Therefore, chronic strain of the muscles, ligaments and joints of the spine and pelvis occurs.

Camp Anatomical Supports have an adjustment by means of which their lower sections can be evenly and accurately brought about the major portion of the bony pelvis. When the pelvis is thus steadied, the patient can contract the abdominal muscles with ease and then with slight movement straighten the upper back.

*Relieving back strain and fatigue due to faulty body mechanics is a feature of the Camp Support illustrated and other types for Prenatal, Postnatal, Postoperative, Pendulous Abdomen, Visceroptosis, Nephroptosis, Hernia and Orthopedic conditions.*

**S. H. CAMP AND COMPANY • JACKSON, MICHIGAN**

*World's Largest Manufacturers of Scientific Supports*

*Offices in New York • Chicago • Windsor, Ontario • London, England*



# *How mild can a cigarette be?*



**I**n a recent coast-to-coast test, hundreds of men and women smoked Camels—and only Camels—for 30 consecutive days. These people smoked on the average of one to two packages of Camels a day during the entire test period. Each week, throat specialists examined these Camel smokers. A total of 2,470 careful examinations were made by these doctors. After studying the results of the weekly examinations, these throat specialists reported:

## **“NOT ONE SINGLE CASE OF THROAT IRRITATION DUE TO SMOKING CAMELS!”**

*Money-Back  
Guarantee!*

Test Camel mildness for yourself in your own “T-Zone.” T for taste, T for throat. If, at any time, you are not convinced that Camels are the mildest cigarette you’ve ever smoked, return the package with the unused Camels and we will refund its full purchase price, plus postage. (Signed) R. J. Reynolds Tobacco Company, Winston-Salem, North Carolina.

*According to a Nationwide survey:*

### **MORE DOCTORS SMOKE CAMELS**

*than any other cigarette*



Doctors smoke for pleasure, too! And when three leading independent research organizations asked 113,597 doctors what cigarette they smoked, the brand named most was Camel!

# 50 and 1

## Years Treating Alcohol And Drug Addiction

In 1897 Doctor B. B. Ralph developed methods of treating alcohol and narcotic addiction that, by the standards of the time, were conspicuous for success.

Twenty-five years ago experience had bettered the methods. Today with the advantages of collateral medicine, treatment is markedly further improved.

The Ralph Sanitarium provides personalized care in a quiet, homelike atmosphere. Dietetics, hydrotherapy and massage speed physical and emotional re-education. Cooperation with referring physicians. Write or phone.

*The*  
**RALPH**  
**SANITARIUM**  
*Established 1897*

Ralph Emerson Duncan, M.D.  
DIRECTOR



529 HIGHLAND AVE. KANSAS CITY 6, MO.  
Telephone Victor 3624





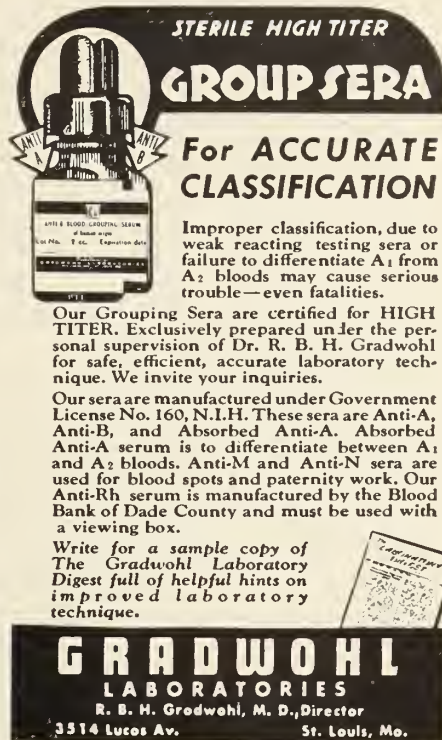
**Action!**

**Appearance!**

... for wearers, particularly women, the natural appearance and the freedom of action afforded are the outstanding qualities of Hanger Limbs. Miss Ferris Jones, a nurse wearing a Hip Control Leg, says: "I never forget that I could not be here—or anywhere that I'd like to be without my leg. I am able to carry on famously—and for me life has regained all its flavor. Thank you for making this possible."

**HANGER** ARTIFICIAL LIMBS

1912-14 Olive Street  
St. Louis 3, Missouri



**STERILE HIGH TITER**

**GROUP SERA**

**For ACCURATE CLASSIFICATION**

Improper classification, due to weak reacting testing sera or failure to differentiate A<sub>1</sub> from A<sub>2</sub> bloods may cause serious trouble—even fatalities.

Our Grouping Sera are certified for **HIGH TITER**. Exclusively prepared under the personal supervision of Dr. R. B. H. Gradwohl for safe, efficient, accurate laboratory technique. We invite your inquiries.

Our sera are manufactured under Government License No. 160, N.I.H. These sera are Anti-A, Anti-B, and Absorbed Anti-A. Absorbed Anti-A serum is to differentiate between A<sub>1</sub> and A<sub>2</sub> bloods. Anti-M and Anti-N sera are used for blood spots and paternity work. Our Anti-Rh serum is manufactured by the Blood Bank of Dade County and must be used with a viewing box.

Write for a sample copy of The Gradwohl Laboratory Digest full of helpful hints on improved laboratory technique.

**GRADWOHL**  
LABORATORIES  
R. B. H. Gradwohl, M. D., Director  
3314 Lucas Av. St. Louis, Mo.

*for Fifty Years*

**PROFESSIONAL PROTECTION  
EXCLUSIVELY**

**THE  
MEDICAL PROTECTIVE COMPANY  
FORT WAYNE, INDIANA**

ST. LOUIS Office: A. W. Breckenkamp, Representative, 623 Missouri Theatre Building, Telephone Newstead 0404

# ANOTHER MOSBY BOOK

---

## Handbook of

# *DISEASES OF THE SKIN*

---



By RICHARD L. SUTTON, M.D., Emeritus Professor  
Dermatology and Syphilology,  
and  
RICHARD L. SUTTON, Jr., M.D., Associate Pro-  
fessor of Dermatology and Syphilology, both of the  
University of Kansas Medical School

749 Pages

1057 Illustrations

PRICE, \$12.50

Written with this principle—"to tie descriptions and concepts of disorders of the skin with general medicine and biology,"—Handbook of DISEASES OF THE SKIN will be equally useful to the specialist and to the non-dermatologist.

The book is compact, concise, yet fully comprehensive. Dr. Sutton is a successful practitioner who has written for fellow practitioners who look for details without verbosity. It contains over one thousand uncommonly realistic illustrations. For students, specialists and researchers, the bibliographic entries are in the thousands—enabling anyone to find his way in the literature.

Treatment is stressed, and causation the principle means of classification. The psychosomatic side of skin disorders is given considerable attention and disturbances of growth, as they relate to dermatology, are fully discussed.

### Chapter Headings

Anatomy  
Embryology  
Physiology  
Symptomatology and Pathology  
Etiology  
Diagnosis  
Treatment  
Dermatoses Due to Physical Agents  
Dermatoses Due to Chemical Agents  
Dermatoses Due to Viruses  
Dermatoses Due to Rickettsias  
Dermatoses Due to Bacteria  
Dermatoses Due to Fungi  
Dermatoses Due to Animals

Dermatoses of Metabolic Disturbances  
Dermatoses of Vascular Origin: Purpura  
and Vascular Gangrene  
Dermatoses of Neurologic and Psychiatric  
Origin  
Dermatitides of Unknown Cause  
Dermatoses of Pigmentary Disorder  
Dermatoses Characterized by Atrophy  
Dermal Manifestations of Malformation  
and Neoplasia  
Diseases Particularly Affecting the Cuta-  
neous Appendages  
Diseases of Mucosae Adjoining the  
Skin

---

### ORDER FORM

---

The C. V. Mosby Company  
3207 Washington Blvd.  
St. Louis 3, Missouri

JMoS 3-49

Please send me a copy of Sutton & Sutton's

Handbook of DISEASES OF THE SKIN—The price is \$12.50

...Enclosed find check.

...Charge my account.

Name.....

Address.....



# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies  
Issued Monthly under direction of the Publication Committee

COPYRIGHTED, 1949, BY MISSOURI STATE MEDICAL ASSOCIATION. ALL RIGHTS RESERVED.

VOLUME 46

MARCH, 1949

NUMBER 3

G. V. STRYKER, M.D., Editor  
HELEN PENN, Assistant Editor  
623 Missouri Bldg., St. Louis, Mo. Telephone, Newstead 0404-05

PUBLICATION COMMITTEE { G. V. STRYKER, M.D., Chairman  
V. T. WILLIAMS, M.D.  
H. E. PETERSEN, M.D.  
FRED R. FARTHING, M.D.

### MASSIVE HEMORRHAGE FROM CARCINOID OF THE STOMACH

VICTOR E. SCHERMAN, M.D., *St. Louis*

MAS HARA, M.D., *St. Louis*

AND

HAROLD F. TRAFTON, M.D., *St. Louis*

CARCINOID TUMORS, as named by Oberndorfer in 1907, comprise an interesting group of tumors which are believed to arise from the chromo-argentaffin cells of Masson in the intestinal tract. It was shown by Gosset and Masson in 1914 that certain granules in the cytoplasm of these cells reduced silver and appeared as tiny brown or black particles.<sup>1</sup> These tumors sometimes are referred to as "argentaffin" tumors, although this terminology is open to criticism for silver reducing granules are not always present in carcinoids.<sup>2</sup>

In 1933, Raiford of Johns Hopkins reported an incidence of twenty-nine carcinoids in a series of 1,611 tumors of the intestinal tract.<sup>3</sup> It was emphasized in this series that these tumors may be malignant, particularly those involving the stomach and colon.

These carcinoid tumors are most commonly found in the appendix and lower ileum, less often in the upper ileum and jejunum and rarely in the colon. However, they have been reported in the rectum,<sup>4</sup> gallbladder<sup>5</sup> and stomach.

In 1939 Plaut reviewed the literature and found nine carcinoid tumors of the stomach reported up to that time.<sup>6</sup> Five of these cases were incidental autopsy findings, to which he added one of his own. The remaining four were associated with clinical symptoms, one having had massive hemorrhage.

A review of the literature reveals two additional cases found incidentally at autopsy and reported by Porter and Whelan in 1939,<sup>7</sup> and one additional case

with clinical symptoms reported by Lemmer in 1942.<sup>8</sup>

The purpose of this paper is to add two cases of carcinoid tumor of the stomach to the literature, one a case causing clinical symptoms with massive hemorrhage, the other as an incidental autopsy finding.

#### REPORT OF CASES

Case 1. Mrs. C. B., a 48 year old housewife, was admitted to the St. Louis City Hospital on October 27, 1946,

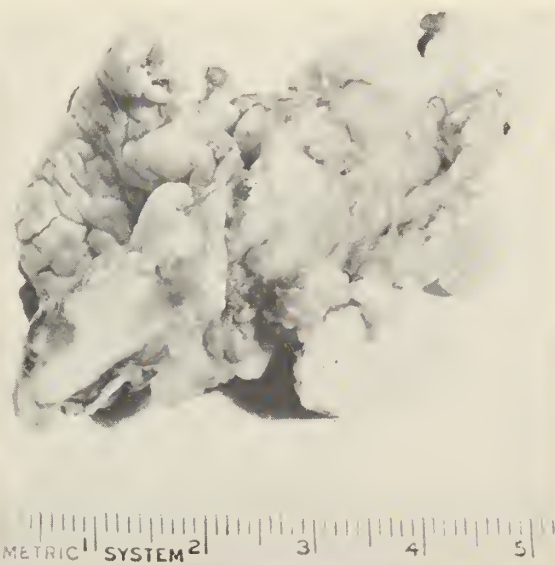


Fig. 1. Photograph of the specimen showing a cut section of the lesion at the lower left and the node at the lower right corner.

From the Department of Surgery, St. Louis University Medical School, St. Louis.

Senior Instructor, Department of Surgery, St. Louis University School of Medicine; Resident Surgeon, Barnard Skin and Cancer Hospital; Resident Surgeon, St. Louis City Hospital.

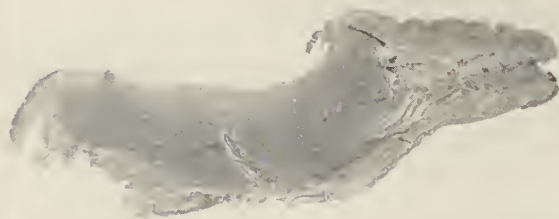


Fig. 2. Low power photograph of a cross section of the lesion.

with a chief complaint of vomiting blood and passing black stools. Her present illness dated from three weeks prior to admission, at which time she had epigastric fullness and epigastric pain without radiation, which occurred thirty minutes following the ingestion of her meals. Relief was obtained with alkali. On the day of admission she vomited approximately two tablespoons of dark red blood. That evening she had several tarry stools.

Six years prior to admission, a diagnosis of cholelithiasis was made elsewhere by roentgen ray studies. She was placed on an ulcer diet and remained asymptomatic.

The physical examination revealed a pale, well nourished 48 year old white woman. Blood pressure was 118/76, pulse 120, temperature 99.4 F. The pertinent findings were limited to the abdomen. There was slight tenderness in the epigastrium and no masses were palpable. The urinalysis was normal, white blood cells 19,150 with a normal differential, red blood cells 3,820,000, Hb. 10.5 gms., nonprotein nitrogen 32. A diagnosis of bleeding peptic ulcer was made.

The following morning she had an emesis of 300 cc. of dark red blood and, following a transfusion, her condition was good. The next day she vomited 700 cc. of blood and went into shock. The shock was corrected with blood transfusions and an emergency abdominal exploration was undertaken under cyclopropane anesthesia. A firm, button-like, yellow, ulcerated lesion, measuring 2 cm. in diameter, was found on the lesser curvature of the stomach in the region of the cardia. An adjacent yellow lymph node of firm consistency was palpated in the gastrohepatic ligament. The liver was normal and there were palpable stones in the gallbladder. A wedge excision of the gastric lesion and adja-

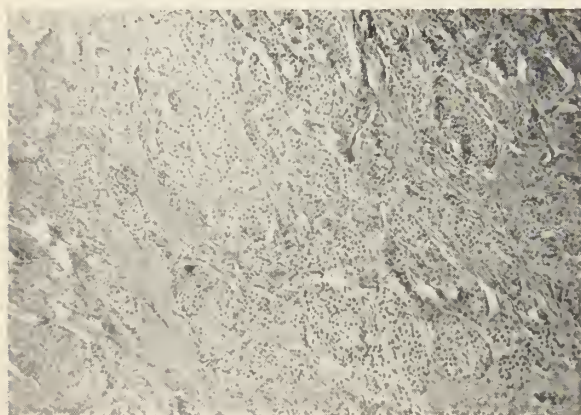


Fig. 3. Photomicrograph showing nests of medium sized cells with round and oval nuclei of uniform size and staining qualities.

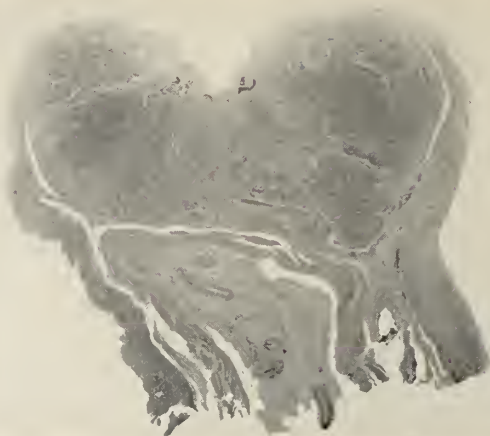


Fig. 4. Low power photograph of a cross section of the lesion.

cent gastrohepatic ligament including the lymph node was done since it was believed that more extensive surgery could not be tolerated by the patient.

The convalescence was complicated by a minimal atelectatic process in the right lung. Following a normal gastrointestinal series, the patient was discharged from the hospital on the twenty-second postoperative day in good condition.

The patient has refused further surgery and has been followed in the out-patient department. There was no evidence of recurrence when last seen in August 1948.

The microscopic sections show the tumor mass to be composed of solid nests and cords of medium sized cells with moderate cytoplasm and round to oval nuclei of uniform size and staining properties. The cell masses are supported in a fibromuscular stroma. No mitoses are seen and there is no necrosis. This tissue extends into the base of the ulcer as was noted grossly. A narrow zone of peptic digestion lines the base of the ulcer. The deeper muscle coats appear to be compressed and invaded by the growth. Section of the nodule in the gastrohepatic ligament shows it to be composed of a tissue entirely like that of the submucosal mass. A small area of lymphoid tissue at one point on the periphery suggests that the nodule represents a lymph node which is replaced largely by the growth. Aniline ponceau fuchsin and Masson argentaffin stains fail to reveal argentaffin granules in the cytoplasm of the cells. However, grossly and microscopically, the tissue more closely resembles a carcinoid than a carcinoma. The material has been reviewed by several pathologists including Dr. J. A. Saxton, Jr., Dr. S. H. Gray, Dr. L. V. Ackerman, Dr. Henry Pinkerton and Drs. Martin and Ruth Silberberg. All are in agreement that carcinoid is the most probable diagnosis of the lesion.

Case 2. Mr. J. W., aged 65 years, was admitted to the St. Louis City Hospital on July 15, 1938, in a comatose condition. He expired six hours following admission. An incidental carcinoid tumor of the stomach was found at autopsy. This was described as a polypoid lesion, 2 cm. in diameter, with an ulceration at the tip, located along the greater curvature near the middle of the stomach.

The microscopic sections show mucosa and muscularis mucosa elevated by a mass composed of small nests and strands of uniformly medium sized cells with oval nuclei and slightly basophilic cytoplasm, supported by a thin fibromuscular stroma. Mitotic figures are not seen.



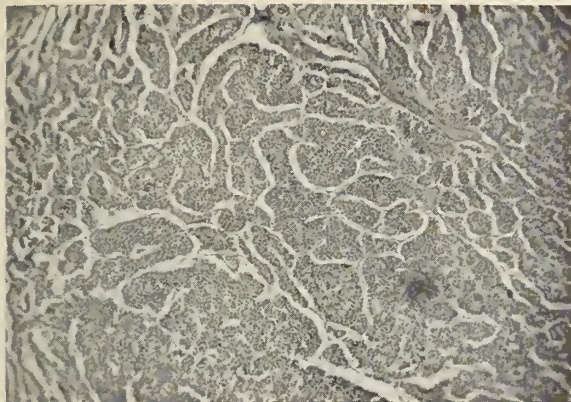


Fig. 5. Photomicrograph exhibiting a picture similar to that of case 1.

A central depression is present and at this point, the muscularis mucosa is interrupted and nests of cells are seen in the mucosal stroma. The masses of small cells extend to but do not penetrate the main muscle coats. Argentaffin stains were not attempted.

#### SUMMARY

1. Of the five clinical cases of carcinoid of the stomach reported in the literature, one was a source of massive hemorrhage. One additional case with massive hemorrhage is reported.

2. The metastatic tendencies of gastric carcinoid are brought out by the clinical case reported.

3. A carcinoid of the stomach found incidentally at autopsy is added to the eight reported in the literature as incidental findings.

3720 Washington Ave.

The authors gratefully acknowledge the services rendered in the study of the pathologic specimens by the mentioned pathologists.

#### BIBLIOGRAPHY

1. Gosset, A., and Masson, P.: Tumeurs endocrines de L'appendice. *Presse med.* **22**:237, 1914.
2. Masson, P.: The Significance of the Muscular Stroma of Argentaffin Tumors (Carcinoids). *Am. J. Path.* **6**:499-514, 1930.
3. Raiford, T. S.: Carcinoid Tumors of the Gastro-intestinal Tract. *Am. J. Cancer* **18**:803, 1933.
4. Rigdon, R. H., and Fletcher, D. E.: Multiple Argentaffin Tumors (Carcinoids) of the Rectum. *Am. J. Surg.* **71**:822, 1946.
5. Bosse, M. D.: Carcinoid Tumor of the Gallbladder. *Arch. Path.* **35**:898-9 (June) 1943.
6. Plaut, A.: Carcinoid of the Stomach. *Arch. Path.* **28**:712-714, 1939.
7. Porter, J. E., and Whelan, C. S.: Argentaffin Tumors. *Am. J. Cancer* **36**:343-358, 1939.
8. Lemmer, K. F.: Carcinoid Tumors of the Stomach. *Surgery* **12**:378-382, 1942.

## SPONTANEOUS RUPTURE OF THE UTERUS IN LATE PREGNANCY ACCOMPANIED BY PLACENTA ACCRETA

MILTON H. MEYERHARDT, M.D., *St. Louis*

MY INTEREST IN placenta accreta was stimulated recently as the result of a case of spontaneous rupture of the uterus in late pregnancy, definitely associated with this lesion.

Before presenting this rather rare case of placenta accreta, it might be of interest to stress certain points of the condition in general and also to review similar cases that I was able to find in the literature. Therefore, I wish to stress the following points: (1) the frequency of the condition and (2) a discussion of various phases of its etiology.

#### FREQUENCY OF PLACENTA ACCRETA

In reviewing various textbooks, I found the monograph of Hermann Schmid in the encyclopedia of Halban and Seitz the most detailed, instructive and complete on this condition. Therefore, I shall quote freely from this article. Definitely, the degree of frequency varies greatly with different authors. Leopold makes the statement that he has observed the condition once in 10,000 deliveries. Polak of Brooklyn reports one case in 6,000 labors. Goethals of Boston quotes his incidence as one in 8,223 labors, but more interesting are the figures of the late Barton Cooke Hirst who saw only one case in 40,000 deliveries. Stoeckel, before a Congress of Gynecologists in Vienna, apparently reviewing the literature, stated the incidence as twelve cases in 500,000 deliveries. In 1932

Bethel Solomons, before a meeting of the American Association of Obstetricians and Gynecologists, told that there occurred no case of placenta accreta in the last 50,000 deliveries at the Rotunda Hospital in Dublin. He was at the time discussing a paper on the subject by E. Lee Dorsett of St. Louis. With these facts, it can be said safely that placenta accreta is a fairly rare lesion. Schmid in Halban and Seitz reports three similar cases of rupture of the uterus with placenta accreta and I am, therefore, including abstracts of these cases in my report.

#### ETIOLOGY OF PLACENTA ACCRETA

1. *Manual Removal in a Previous Labor or Labors.*—Here, according to Dietrich, the uterine musculature could be injured as well as complete removal of parts of the endometrium. Accompanying infection also may play a part. Vigorous use of the curet under these conditions could lead to the formation of subsequent scar tissue which occasionally leads also to oligomenorrhea or even amenorrhea.

2. *Atrophy and Scar Tissue Formation Following the Use of Radium.*—This condition has yet to be observed, but the possibilities are quite obvious. I was able to find no reported case of placenta accreta following the use of radium.

3. *War Amenorrhea.*—Von Schweitzer mentions "war amenorrhea" with its subsequent atrophy of the endometrium.

4. *Submucous Myomata with Accompanying Co-*

From the Jewish Hospital and the Department of Obstetrics and Gynecology, Washington University, St. Louis, Missouri.



Fig. 1. (Alexandroff's case.) 1. Shows ruptured uterus with the placenta. 2. Shows a normal distribution of elastic tissue in muscle wall. 3. Shows an invasion of trophoblast in the muscle.

*incident Atrophy of the Endometrium Above the Tumor.*—Several such cases have been reported.

5. *Diverticula of the Uterus.*—Although rare, this has been mentioned.

6. *Classical Cesarean Section.*—Why the condition does not occur more often in uterine scars is somewhat of a puzzle to me. Many of these scars hold in subsequent pregnancies, but not infrequently they are handled by repeated section so that even if the scars are not defective they are not put through the strain of labor. In these cases, the placenta should have an easy opportunity to infiltrate far more deeply into the musculature.

7. *Perforation of the Uterus.*—Similarly, Robert Meyer mentions perforation of the uterus, the regenerating endometrium rapidly filling the defect much as other epithelium lines an ordinary fistulous tract.

To my mind these are the chief factors concerned and Schmid, in closing his collected work concerning the etiology, states that there is a possibility that as a result of the atrophic endometrium,



Fig. 2. (Dietrich's case.) Trophoblast appears through the uterine wall with rupture.

the trophoblast, in a struggle for existence, takes on a greater power of penetration, perhaps somewhat like in a chorioepithelioma. In reviewing the various facts that are concerned, it is safe to say that anything that will cause atrophy of the endometrium and an increased penetration of the placenta into the uterine wall are the chief factors. It is interesting that in Schmid's most thorough review no mention is made of diffuse adenomyosis of the uterus. This condition appeared in this case and will be commented upon later in detail. A brief report of the three cases found in the literature follows:

#### REPORT OF CASES

Case of J. Kratochvil.<sup>2</sup>—Patient was 23 years old. First pregnancy had resulted in manual removal of the placenta. Second pregnancy resulted in abortion at four months, followed by curettage. In the pregnancy reported, after lifting a heavy load, the uterus ruptured as proved by laparotomy. The uterus was found paper thin and the uterine wall had a defect through which the breach of the fetus was protruding. The dead fetus was delivered through the defect. The child weighed 3,220 gms. The thinned out placenta was found on a thin uterine wall, practically nothing but peritoneum remaining. In an attempt to remove it, the cotyledons



Fig. 3. (Dietrich's case.) Shows a marked invasion of placenta almost entirely through uterine wall.



remained firmly fixed to the wall. On microscopic examination the decidua serotina was entirely absent. The destruction of the myometrium was so extensive at the placental site that practically nothing but the peritoneal covering remained. The handling and outcome of the case is not mentioned in the abstract. The original article in Moravian literature was not available.

Case 2. In 1900, Alexandroff<sup>3</sup> reviewed the literature of spontaneous rupture of the uterus tabulating eighteen other cases with one of his own which apparently is the first case of spontaneous rupture of the uterus associated with placenta accreta.

A 25 year old woman went to his clinic on May 5, 1899. She considered herself pregnant ten months and had felt no fetal movements for three weeks. Her first pregnancy was at 21 years of age and she delivered a second time one year and four months later. On April 15 she complained of abdominal pain, absence of fetal movements and moderate vaginal bleeding. On admission, examination revealed a mass three fingers above the umbilicus which in character did not give the impression of a pregnant uterus; another mass was felt well on the right side. A diagnosis was made of rupture of the uterus with the protrusion of the fetus into the abdominal cavity.

A laparotomy was performed and the child was found free in the abdomen. There was a large rent in the upper left portion through which the placenta was protruding. The fetus weighed 3,100 gms. The placenta was indurated, small in all dimensions; the cotyledons were attached deeply but microscopically normal. The placenta was definitely adherent in the upper portion of the tear. Microscopically chorionic villi were found in this area deep in the musculature.

He concludes, and I believe rightly, that the spontaneous rupture of the uterus during pregnancy was due chiefly to a well established placenta accreta.

Case 3. H. A. Dietrich,<sup>4</sup> in 1922, reported a 40 year old gravida V. In her last two pregnancies manual removal of the placenta was necessary and, in one, parts of adherent placental tissue were left. Both postpartums were associated with fever. The present pregnancy had given no great difficulty until entrance into the hospital. The patient entered in labor with a vertex presentation. Fetal heart sounds were good. Shortly thereafter, the patient went into collapse. Heart sounds were weak and then absent. The impression was a premature separation of the placenta. Laparotomy was



Fig. 5. (Meyerhardt's case.) Gross specimen: Shows uterus partially everted upon itself with adherent placenta to posterior part of uterine wall. Tear across top of fundus measures 13 centimeters.

done immediately, a hysterotomy performed and the child delivered by version. Delivery of the placenta was not possible as it was embedded deeply in the uterine wall. The patient died. Autopsy showed two and a half liters of blood in the abdominal cavity. (Apparently the patient died on the operating table.) Microscopic examination showed the placenta was embedded deeply in the musculature. There was little uterine musculature left.

Case 4. (Meyerhardt). A 23 year old white housewife was admitted to the labor room at Jewish Hospital on July 6, 1946, at 5:10 p. m. complaining of mild abdominal cramps. A gravida III, para I, she was entering her ninth month of pregnancy.

*Past History.*—She had had a tonsillectomy in 1929 and a normal pregnancy in 1943 (normal female child, weight gain of 20 pounds, low forceps with episiotomy.) After being at home for three weeks, she was readmitted because of severe vaginal hemorrhage and abdominal cramps. A dilatation and curettage were done under general anesthesia and a large piece of placental tissue was removed with a sponge stick. The pathologic report showed chorionic villi; many of the villi were calcified, and decidual cells were present.

The patient was anxious to conceive and in January 1945 a Rubin test was done. In February 1945 examination revealed an early pregnancy, her last menstrual

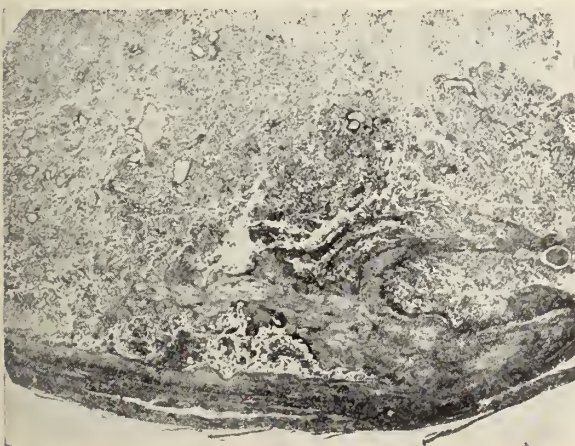


Fig. 4. (Dietrich's case.) Microscopic specimen: Shows a trophoblast deep in the uterine wall with small strip of uterine tissue left.

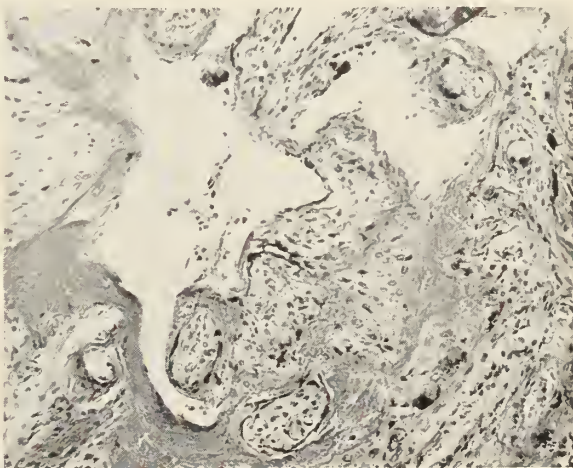


Fig. 6. (Meyerhardt's case.) Shows a marked invasion of trophoblast tissue in musculature.



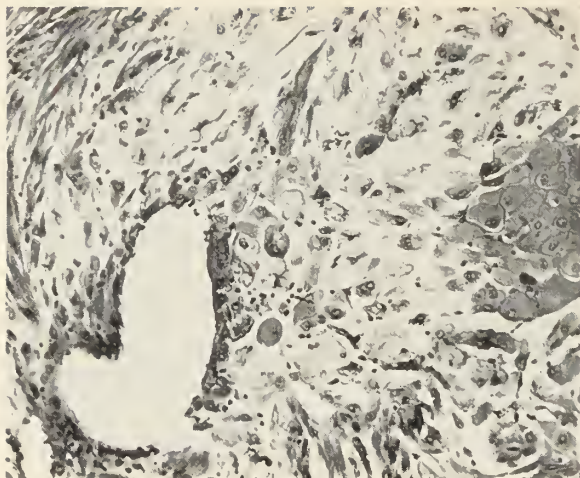


Fig. 7. (Meyerhardt's case.) Shows a marked decidual change in diffuse adenomyosis area. Note uterine gland.

period having been January 5. She evidently became pregnant immediately after the Rubin test, which was done on the eleventh of January. During the first week of May she started spotting and was put to bed with the usual palliative treatment. The uterus did not increase in size and on May 24, 1945, she was readmitted to the hospital with a diagnosis of a missed abortion. A Friedman test was repeatedly negative and the uterus remained approximately the size of a fourteen weeks gestation. She was sent home and reentered on June 4, 1945, with a severe hemorrhage. A dilatation and curettage were performed and the uterine contents removed. The patient had a large amount of bleeding which was controlled with hot intravaginal douches and uterine packing.

In December 1945 the patient was again pregnant, her last period having been November 6, 1945. She had a normal prenatal period except for a retrodisplacement of the uterus, which was replaced easily. She also had rather severe abdominal cramps throughout her pregnancy, which I took to be Braxton Hicks' contractions.

The present illness began July 6, 1946, at 2:00 p. m. While sitting in a beauty parlor she experienced a "sudden tearing sensation" in the lower abdomen. When seen at home, the patient was apprehensive. The uterus was fairly firmly contracted. However, because of pain she was sent to the hospital by ambulance with a diagnosis of possible premature separation of the placenta. Upon arrival at the hospital at approximately 5:20 p. m., the patient seemed to be having no contractions. An abdominal examination revealed the following: head in fundus, back to left, fetal heart apparently normal, presenting part deep in the pelvis, cervix fairly long with dilatation of one finger. No diagnosis had been made at 5:30 p. m. when the patient began having painful definite contractions every five or six minutes, lasting approximately 30 seconds. At approximately 5:40 p. m. upon abdominal examination, the head was much more easily palpated than previously and, in spite of admonitions to refrain from doing so, the patient was trying to bear down. The blood pressure was 120/68,

and pulse 74. A rectal examination revealed that the presenting part had disappeared from the pelvis and there was a peculiar bulging of the cul-de-sac. An immediate vaginal examination confirmed these findings and during the procedure the patient began to perspire profusely and went into shock. A diagnosis of a ruptured uterus was made and an attempt was made to start glucose and plasma. Within ten minutes, the blood pressure had dropped to 60/30 and the barely perceptible pulse was rapid and weak. It was difficult to get into the patient's veins and it was necessary to cut down on the veins in both arms. Immediately preceding and during the operation the patient received 1,000 cc. of whole blood, 500 cc. of plasma and 1,000 cc. of 5 per cent glucose and normal saline. The blood pressure was 96/34 at the beginning of the operation and rose to 114/48 at the end of the procedure. The pulse varied from 72 to 110 during the same time. On opening the abdomen, a large amount of blood and fluid was found in the peritoneal cavity. The body of a well-formed, slightly premature fetus was lying in the abdomen transversely connected to the uterus by the umbilical cord. The placenta was adherent to the posterior part of the fundus, which gave the picture of an abdominal pregnancy in that the uterus had become entirely everted upon itself through the rupture. The dead fetus was extracted and removed. The anesthesia lasted 32 minutes; a supravaginal hysterectomy was performed in 25 minutes. The patient left the operating room in fairly good condition.

The patient had a fairly normal convalescence, receiving penicillin for seven days. She also had a transfusion consisting of one unit of blood on the first postoperative day, and she had to be catheterized for three days. The temperature stayed around 101 and 102 F. for three days. It then went down to normal on the third postoperative day and stayed there.

On July 16, 1946, the ninth postoperative day, the patient was discharged in good condition with a Hb. of 68 per cent.

*Gross Pathologic Report.*—"Specimen consisted of a uterus whose fundus had been ruptured and, protruding through the opening, was the placenta. The placenta was partially separated and partly attached to the wall of the uterus. The opening of the uterus measured 13 cm."

*Microscopic Description.*—"From the various sections in this case, one can discover easily the deep penetration of the trophoblast into the uterine musculature. Also, the uterus shows in marked degree the picture of a striking diffuse adenomyosis. These islands of deep endometrial stroma are present with accompanying glands, the stroma showing the decidual change characteristic of this condition in pregnancy. This case shows such penetration of villi that there can be no doubt of the cause of the spontaneous rupture."

110 Pasteur Bldg.

#### BIBLIOGRAPHY

1. Schmid, Hermann: Halben and Seitz, vol. 8, part 1, pp. 120-137.
  2. Kratochvil, J.: Zentral. f. Gynak. 46: 1922 abstract. (Original article, Casopis Lekaru Ceskyh. 1921, No. 47.)
  3. Alexandroff, G. H.: Monatschr. f. Geburtsh. u. Gynak. 12:447, 1900.
  4. Dietrich, H. A.: Ztschr. f. Gynak. 84:579, 1921-1922.
- I wish to express appreciation to Dr. Otto Schwarz for his excellent advice and suggestions in preparing this monograph.



# GLUTAMIC ACID IN THE TREATMENT OF MENTALLY HANDICAPPED CHILDREN

A REVIEW OF THE BACKGROUND

ROGER W. CLAPP, M.D., *St. Louis, Missouri*

THE MENTALLY inadequate individual is one of medicine's oldest problems. Usually the defects are considered irreversible, with treatment and research being concentrated correctly on special education. Glutamic acid may offer specific assistance to many of these patients.

In 1943, Price, Waelsch and Putman<sup>1</sup> reported on the administration of dl glutamic acid hydrochloride as a practical method of obtaining a ketogenic diet for the treatment of petit mal and psychomotor seizures. Their results, insofar as the treatment of seizures was concerned, proved to be variable. However, they said, "Increased mental and physical alertness have been most gratifying to the patient, family and physician." In addition, they reported, "The degree of improvement in mental efficiency could not be correlated with the incidence of seizures." This study initiated new investigations.

Several years previously, biochemical investigation had indicated that glutamic acid has an integral place in brain metabolism.<sup>2</sup> More recent investigation suggested that this amino acid increased the rate of acetyl choline formation which is bound closely to nerve activity.<sup>3,4,5</sup> A chemical basis for clinical results is present.

Animal investigation also was favorable. Zimmerman and Ross<sup>6</sup> did meticulously controlled experiments which demonstrated that rats fed on diets supplemented with glutamic acid would learn a problem maze more rapidly than control animals. Stressing level of performance rather than speed, other workers<sup>7</sup> found that glutamic acid seemed to enhance rat learning.

On further studies with petit mal patients, Waelsch and Price<sup>8</sup> concluded that natural L plus glutamic acid was as effective as the dl glutamic acid hydrochloride used in their original work.<sup>1</sup>

Albert et al<sup>9</sup> tested eight human cases. Such great care was taken to avoid error that each case was a significant experiment in itself. An average of 9 gm. of glutamic acid was given to each patient daily. Placebos were substituted for some periods. A definite rise in mental age was recorded during glutamic acid periods with relapse during placebo periods.

In two reports, Zimmerman et al<sup>10,11</sup> reported on sixty-nine patients treated with glutamic acid. They included representatives of all age groups from childhood to adolescence at variable intellectual levels, not all mentally retarded. Some had convulsive disorders. A control group of thirty-

seven patients, including mentally retarded or convulsive patients also were psychometrically tested.

Glutamic acid was given in gradually increasing doses until increased cortical activity, psychic or motor or both, was observed. The dosage then was reduced slightly and considered optimal. This usually proved to be between 12 and 24 gm. per day. Six months was the test period.

The results were most encouraging with the seriously retarded group making the most progress. The Stanford-Binet testing was representative (table 1).

Study of the controls revealed no increase of IQ when convulsions were reduced or controlled. Also during two years and eleven months of observation these patients advanced their average mental age only 18 months while the experimental group advanced 13 months of mental age in six months. The IQ of the controls actually calculated slightly lower at the end of this two year, eleven month period.

Primary and secondary feeble-mindedness were not differentiated in this experiment.

The authors conclude that, "Greater improvement occurs on tests requiring abstract thought than those requiring motor skill," and "In most cases a greater degree of emotional stability results."

Some studies regarding toxicity have been done. Intervinous glutamic acid given to dogs produced vomiting, excess salivation and slow pulse rate.<sup>12</sup> In a study of intervenous amino acids, Madden et al<sup>13</sup> reported that glutamic acid was the one of many tested that caused gastric upset. Dogs also were used in this experiment.

At present, only one manufacturer has L plus glutamic acid available.\* This is a 0.5 gm. tablet for oral administration. Occasional nausea and hypermotor activity are reported in human patients. The first is overcome by dose reduction and later gradual increase, the second is a signal of nearing excess. It would seem that toxic effects are rare enough to be a minor consideration with oral administration.

## DISCUSSION

Glutamic acid is readily available in a normal diet.<sup>14</sup> Of casein 21.77 per cent is glutamic acid as is 12.89 per cent of lactalbumin, 43.66 per cent of gliadin (wheat) and 26.17 per cent of zein (corn). The body also can synthesize this substance.

It is difficult to understand why a substance so abundantly available in the diet is so beneficial as a supplement. However, it can be recalled that

<sup>\*</sup>Fellow in Pediatrics at St. Louis University School of Medicine.

<sup>\*</sup>Parke Davis and Company.

Table 1. Results of Stanford-Binet Testing After Six Months of Glutamic Treatment.

			BEFORE GLUTAMIC ACID		AFTER GLUTAMIC ACID		
	Average Age	No	Mental Age	IQ	Mental Age	IQ	Chances of Real Dif.
Most seriously retarded children	11 yrs., 8 mos.	38	5 yrs., 8 mos.	49.08	6 yrs., 8 mos.	55.39	certainty
Entire group	11 yrs., 2 mos.	60	6 yrs., 10 mos.	62.67	7 yrs., 11 mos.	69.67	95 in 100

liver was fed to pernicious anemia cases without benefit before discovery that large doses were needed for therapeutic effect.

In the work in the St. Louis Society for Crippled Children Cerebral Palsy Training Unit, every effort is made to facilitate training. For example, prostigmine sometimes is used to create relaxation for speech therapy. Any achievement of skill during this period usually is retained even after the drug is discontinued. It is not felt that administration of the drug without such a definite purpose is helpful. Glutamic acid is used in a like manner. Some of the cases are trainable but mentally dull. While these children are receiving physical, occupational and speech therapy, glutamic acid is administered. The initial dose is 4.0 grams daily, with a gradual increase over a period of weeks until from 10 to 14 grams are administered. It is the clinical impression that glutamic acid assists the therapists to reach a slightly higher achievement level in these cases.

#### SUMMARY

The biochemical, animal and clinical experiments suggesting that the administration of L plus glutamic acid in large doses be used to improve mentally handicapped children, and so facilitate teaching, are reviewed.

This substance is administered to mentally dull children in the St. Louis Society for Crippled Children Cerebral Palsy Training program. It is thought

that glutamic acid is indicated only as an adjunct to teaching.

#### BIBLIOGRAPHY

1. Price, J. C.; Waelsch, H., and Putman, T. J.: dl-Glutamic Acid Hydrochloride in the Treatment of Petit Mal and Psychomotor Seizures, *J. A. M. A.* **122**:1153 (Aug. 21) 1943.
2. Weil-Malherbe, H.: Studies on Brain Metabolism. Mechanism of Glutamic Acid in Brain, *Biochem. J.* **30**:665 (April) 1936.
3. Nachmansohn, D.; Cox, R. T.; Coates, C. W., and Machado, A. L.: Action Potential and Enzyme Activity in the Electric Organ of Electrophorus Electricus; II. Phosphocreatine as Energy Source of the Action Potential, *J. Neurophysiol.* **6**:383 (September-November) 1943.
4. Nachmansohn, D., and Machado, A. L.: The Formation of Acetylcholine. A New Enzyme: "Choline Acetylase," *J. Neurophysiol.* **6**:397 (September-November) 1943.
5. Nachmansohn, D.; John, H. M., and Waelsch, H.: Effect of Glutamic Acid on the Formation of Acetylcholine, *J. Biol. Chem.* **150**:485 (October) 1943.
6. Zimmerman, F. T., and Ross, S.: Effect of Glutamic Acid and Other Amino Acids on Maze Learning in the White Rat, *Arch. Neurol. & Psychiat.* **51**:446 (May) 1944.
7. Albert, K. E., and Warden, C. J.: The Level of Performance in the White Rat, *Science* **100**:476 (November 24) 1944.
8. Waelch, H., and Price, J. C.: Biochemical Aspects of Glutamic Acid Therapy for Epilepsy, *Arch. Neurol. & Psychiat.* **51**:393 (April) 1944.
9. Albert, K. E.; Hoch, P., and Waelch, H.: Preliminary Report on the Effect of Glutamic Acid Administration in Mentally Retarded Subjects, *J. Nerv. & Ment. Dis.* **104**:263 (September) 1946.
10. Zimmerman, F. T.; Burgemeister, B. B., and Putman, T. J.: The Effect of Glutamic Acid Upon Mental Functioning in Children and Adolescents, *Arch. Neurol. & Psychiat.* **56**:489 (November) 1946.
11. Zimmerman, F. T.; Burgemeister, B. B., and Putman, T. J.: A Group Study of the Effect of Glutamic Acid Upon Mental Functioning in Children and Adolescents, *Psychosom. Med.* **9**:175 (May-June) 1947.
12. Unna, K., and Howe, E. E.: Toxic Effects of Glutamic and Aspartic Acids, *Federation Bull.* **4**:138 (March) 1945.
13. Madden, S. C.; Woods, R. R.; Shull, F. W.; Remington, J. H., and Whipple, G. H.: Tolerance to Amino Acid Mixtures and Casein Digests Given Intravenously, *J. Exper. Med.* **81**:439 (May) 1945.
14. Bodansky, M.: Introduction to Physiological Chemistry, **4**:118, 1938.

## SURGICAL MANAGEMENT OF CANCER PATIENTS

#### IMPORTANT CONSIDERATIONS

H. M. WILEY, M.D., *Jefferson City*

AND

EVERETT D. SUGARBAKER, M.D., *Jefferson City*

DURING THE LAST ten years a sufficient number of advances in the surgical management of the poor risk patient has been made to warrant review. The particular application of these advancements to the cancer patient forms the subject of this presentation. The majority of these patients are in the elderly age group. Associated factors such as weight loss, anemia, hypoproteinemia, reduced blood volume and technical difficulties are oftentimes as

closely related to operability, immediate survival and curability as the underlying neoplasm itself. The importance of surgical advancement in cancer therapy becomes more and more real as the incidence of cancer increases and as the frustrated hopes for other forms of treatment thrust a greater responsibility on surgical removal. Therefore, in this discussion attempt is made to focus attention on problems of surgical care as they are of especial



significance in the care of the cancer patient. Some of the material presented has been discussed previously in detail.<sup>1, 2, 3, 4, 5, 6, 7</sup>

#### GENERAL PHYSICAL STATUS

**Age.**—The majority of patients with cancer are between 50 and 70 years of age. Of our patients 67 per cent were more than 50 years of age.<sup>1</sup> In such an age group one may expect to find cardiovascular disease, pulmonary fibrosis, emphysema and poor kidneys as well as other degenerative disorders. Despite such a setting the potential life salvage in the cancer age group usually justifies radical resection of the tumor as the normal life expectancy of persons attaining the age of 60 is still from ten to fifteen years.

**Cardiovascular Renal Status.**—A careful appraisal of the cardiovascular status by blood pressure and eyeground studies, electrocardiography, venous pressure and kidney function tests frequently will be of value in determining the choice of anesthesia, whether the operation should be staged and other precautionary measures. An estimation of the renal function can be obtained by routine urinalysis, concentration-diuresis kidney function test, nonprotein nitrogen and urea clearance determinations. To eliminate unnecessary tests it has been found that in patients who concentrate well there is no need for additional kidney studies. The normal individual excretes at most approximately 40 gm. of solids in the urine per day, each gram of solid requiring about 15 gm. of water to carry it through the normal kidney when working at maximum concentration.<sup>8</sup> Thus, 600 cc. (40 times 15) of urine is the minimum volume required in a normal individual for adequate excretion. In patients with defective kidneys the ability to concentrate is variably less. Each gram of solids may require as much as 40 gm. of water to carry it through the kidneys. Under such circumstances 1,600 cc. (40 times 40) of urine would be required to eliminate the necessary urinary waste products. If the concentrating power (highest specific gravity attainable) is known beforehand then the supply of water to the body is adequate if the specific gravity of the urine remains below the maximum of which the kidneys are capable. It is to be remembered that the kidneys may not be able to concentrate as well after the insult of an operative procedure as they could preoperatively. In general then, because of this possible additional kidney impairment, it is advisable to provide for a urinary output of 1,500 cc. daily.

**Liver Status.**—Liver function tests may be of value in patients with suspected liver or biliary disease. The results are difficult to interpret but in combination they may prove of value. Hepatocellular damage at times can be demonstrated by the prothrombin time, cephalin-cholesterol flocculation test or the presence of urobilinogen in the urine. Because of the many functions of the liver and its tremendous reserve, no one test can be considered

"the test" of liver function. Ivy<sup>9</sup> considers the prothrombin time and response to vitamin K therapy to be the most practical for determining liver insufficiency. Boyce<sup>10</sup> has emphasized the fact that despite the limited precision of liver function tests the information afforded may prove invaluable since it is far easier to bolster a damaged liver threatened by anesthesia or anoxemia than it is a defective kidney or heart. Cole and coworkers<sup>11</sup> have demonstrated impaired liver function following some operative procedures. This impairment is slightly greater following general anesthesia than when spinal anesthesia is used. The use of liver extract, choline, amino acids, glucose and high protein and high vitamin diet are frequently of aid in a moderately damaged liver.<sup>2</sup>

**Weight Loss.**—We have been increasingly impressed by the significance of weight loss in patients with neoplastic lesions. Many times patients, whose tumor seems to be localized and whose general condition appeared good except for the weight loss, have been found at operation to have extensive metastases. Accordingly, in patients who have lost considerable weight a prediction of extensive malignant disease many times will be correct. In reviewing a group of patients with cancer of the stomach, 88 per cent were found to have lost weight.<sup>1</sup> In patients with cancer of the colon or rectum 86 per cent had lost weight and 67 per cent had lost more than 15 pounds.<sup>6</sup> Of 220 patients who were subjected to operation for suspected cancer of the abdominal cavity, 53 had lost 20 pounds or more of weight and approximately half of these (26) were found to be inoperable because of extensive local disease or abdominal carcinomatosis.

Morton's<sup>12</sup> recent observations may contribute somewhat to an explanation of this weight loss. He has found that tumor tissue has a higher priority for nitrogen than does normal tissue. Accordingly, he considers that this accounts for the weight loss in patients with cancer. If this is true it would seem logical that the larger the tumor or the more rapid its metabolism the more ingested protein it would utilize at the expense of normal tissue cells. This would seem to be in agreement with the clinical observation that in patients who have lost considerable weight the tumors are frequently large and extensive to the point of inoperability. This work also might offer some explanation for the high incidence of hypoproteinemia in cancer patients. Weight loss also has a bearing on wound healing, blood volume and anemia as is discussed later.

#### ANEMIA AND BLOOD ADMINISTRATION

A lowered hemoglobin and red blood cell count is usual in cancer patients. Robillard and Shapiro<sup>13</sup> reported hemoglobin values below 50 per cent in 10 per cent of their cases, and below 65 per cent in 65 per cent of their cases. Clark and his associates<sup>14</sup> present evidence to show that there is a fundamental disturbance in hemoglobin metabolism in patients suffering from malignant disease. They ob-



Fig. 1. A simple method devised for the controlled administration of intravenous fluids and blood at a rate dependent on the patient needs.

served a reduced blood volume in most patients with cancers of one kind or another and find that this deficiency is due to a decreased total circulating red cell mass and hemoglobin. Lyons<sup>15</sup> has shown that it is necessary to give from 2,500 to 3,000 cc. of blood to restore the blood volume of such patients to the average for their optimum weight.

We have found it necessary, in the majority of our cancer patients who are to undergo major surgery, to give several preoperative transfusions to correct this important deficiency. We attempt preoperatively to elevate the hemoglobin to 80 per cent or more by this means. As reported in 1940 by Marriott and Kekwick<sup>16</sup> one pint (0.47 liter) of blood will increase the hemoglobin 10 per cent or 10 mg. in the average sized adult. With this rule in mind the number of transfusions necessary to elevate the hemoglobin to the desired level can be estimated roughly. If the patient is losing blood rapidly this rule obviously will not apply.

The rate of infusion should be limited to not more than 500 cc. of fluid at one time, unless the patient is in shock or is bleeding actively. The physiologic reason for this precaution becomes apparent when one considers the relatively inelastic cardiovascular system that many of these elderly patients have. On several occasions we have seen pulmonary edema due to the rapid administration of blood. This usually has occurred when stored blood preserved in 500 cc. of preservative was used. This dilution requires the giving of a fluid volume equal to twice the blood requirement. Because of such experiences we prefer to give blood preserved in as small amount of anticoagulant as is practi-

cal. A. C. D. solution is excellent for this purpose and blood can be preserved for approximately twenty-one days with a minimal amount of deterioration. As a result of the rapid administration of blood we have occasionally seen patients pass rapidly from a state of shock directly into pulmonary edema. The state of rigidity of the cardiovascular system of these patients is obviously severe. This complication is difficult to treat and on at least one occasion we have lost a patient following this sequence of events. Discontinuing the intravenous administration, aspiration of the liquid froth in the bronchial tree, rapid digitalization and the administration of oxygen seem to be the indicated treatment.

In the operating room an attempt should be made to replace blood at the same rate at which it is being lost, or when some traumatic shock is anticipated at a rate calculated to meet both it and the blood loss. It is pointless to replace blood drop by drop when it is being lost rapidly. The addition of a new proctoscopic insufflator to the air vent of the infusion set (fig. 1) makes it possible to administer blood as rapidly as necessary with a steady even pressure. The inflated bulb also makes it possible to estimate the amount of pressure in the bottle. In using this apparatus a word of caution should be sounded because, if the excess air pressure is not released before the infusion is completed, a large amount of air could be inadvertently injected intravenously.

If several blood transfusions are given rapidly as is necessary at times during rapid blood loss or during shock, we usually give an ampule of calcium gluconate intravenously as a possible aid in preventing toxicity from the large volume of sodium citrate that the patient has received. The possible toxic effects of sodium citrate have been sounded by Bruneau and Graham.<sup>17</sup> We also have observed actual tetany on several occasions which was relieved quickly by calcium gluconate administered intravenously.

In conclusion, one can anticipate anemia and reduced blood volume in most cancer patients requiring major surgery and should correct this preoperatively and be prepared to give several transfusions at the time of operation. Blood transfusions may be necessary during the postoperative period because of the frequently prolonged convalescence and the rapid breakdown of transfused blood. To determine this need frequent hemoglobin determination and red blood cell counts are essential. Finally, as will be emphasized later, whole blood is an excellent source of predigested protein.

#### SODIUM CHLORIDE AND WATER REQUIREMENT

Opinion as to the daily requirement of sodium chloride is somewhat confused at the present time, with estimates ranging from 5 gm.<sup>13</sup> to 15 gm.<sup>18</sup> The lower figure is probably more nearly correct. Two of the chief factors in the production of edema are hypoproteinemia and an excess of salt. In sick-



ness the amount of salt excreted by the body is lower than in health due to such factors as malnutrition, sepsis, hemorrhage, wound drainage, anesthesia and liver and kidney disfunction, all of which produce a tendency toward salt retention<sup>19</sup> Maddock and Collier<sup>19, 20</sup> have emphasized that the result of salt retention is hydremia rather than hyperchloremia, and that the sodium chloride concentration is no index of excessive salt retention. We have observed normal blood chloride values in the presence of generalized edema many times, and have come to rely upon an accurate "intake and output" record as an indicator of hydration of our surgical patients. The daily weighing of patients as utilized by Wangenstein<sup>21</sup> is an excellent procedure to estimate the fluid needs of patients. Approximately a 10 per cent gain in weight may occur before edema becomes clinically apparent. Clinical dehydration is usually not observable until a 6 per cent loss in body weight has taken place.

Most surgeons realize that we formerly gave too much sodium chloride to our patients and many times inadvertently produced "salt intoxication." The elderly cancer patient undergoing operation and having suffered from a debilitating disease, usually possessing low reserve kidneys and frequently hypoproteinemic, is particularly susceptible to excess salt. It has been our practice to withhold salt preoperatively and postoperatively, unless severe loss is taking place as by gastric suction. Bartlett<sup>22</sup> believes that the currently accepted figures for a desirable fluid intake following surgery are frequently excessive. He has noted that elderly patients in general, even without detectable disorders of the kidney or circulatory system, may develop water retention on the accepted regimen, and pulmonary edema even has occurred. There is still much to be learned as to the manner in which the tissues handle water. Many of the problems of water balance, particularly in disease, are still unsolved. One cannot predict the functional ability of the kidneys to excrete all water above the needs of the tissues.

With this warning in mind we try not to give more than 3 liters of fluid a day and prefer to give 2 liters if the urinary output is adequate and if it is known that the kidneys can concentrate moderately well.

#### PROTEIN REQUIREMENT

The weight loss so frequently seen in cancer patients is an indication of the decreased nutritional reserve. Of all the decreased nutritional elements the loss of protein reserve is probably of the greatest importance to the surgeon. Convalescence has been defined<sup>23</sup> as essentially a process of tissue synthesis and is dependent on such varied synthesis as the regeneration of muscle mass, of blood and tissue protein, erythrocytes, leukocytes, lymphoid tissue, and of antibodies, certain hormones and enzyme systems. Protein is essential for the fabrication of all these substances. In a study of the serum protein of cancer patients upon whom major

surgery was necessary, we have found that 44 per cent had a total serum protein below 6.5 gms. per cent.<sup>3</sup> Postoperatively, 93 per cent of these patients showed a decline in their serum protein. It also was found that only 35 per cent of the patients who had a postoperative fall in their total proteins recovered their preoperative levels by the tenth postoperative day and, as noted before, 44 per cent of the preoperative levels were low, so the percentage of patients regaining normal protein levels would be even lower. These figures become increasingly important when the results of hypoproteinemia are considered. The following complications are related to this biologic imbalance.<sup>3</sup>

1. The healing of wounds is retarded.
2. The incidence of wound disruption is increased.
3. The relationship of edema to this condition is well established. Clinical edema usually does not appear until approximately a 10 per cent increase in body weight has occurred.<sup>24</sup>
4. Decreased gastrointestinal motility may result from a hypoproteinemic state, and obstruction may occur about an intestinal anastomosis because of local edema resulting from a low blood protein.<sup>25</sup>
5. Increased susceptibility to the toxic effects of anesthesia may be due to a lowered serum protein.<sup>26</sup>
6. Susceptibility to infection is increased also in the hypoproteinemic patient.<sup>27, 28</sup>

The exact explanation of the postoperative serum protein decline is not known but the following factors are known to influence the decrease: (1) a diminished protein intake, (2) enhanced protein catabolism, e.g., fever, (3) impaired liver function, (4) increased capillary permeability, (5) perhaps some as yet unknown effect of anesthesia and (6) loss of protein at operation and postoperative wound secretion.

An extensive discussion of the treatment of hypoproteinemia is not within the scope of this paper, but a number of points should be stressed. It is generally stated that 1 gm. of protein per kilogram of body weight per day is necessary to maintain nitrogen balance. This amount of protein will furnish the daily requirement in individuals whose previous nutritional state has been adequate. Therefore, patients with decreased protein reserves will need more than 1 gm. per kilogram of body weight a day to replace the previous loss. A diet of 3,000 calories a day of which at least 25 per cent is made up of protein, will provide an excess of protein and usually can be assimilated. Tube feedings at times may be of aid in patients who cannot take sufficient calories by mouth. On occasions we have found it advisable to resort to jejunal alimentation. The formula in table 1 has had extensive clinical use with satisfactory results. This formula contains approximately 1.5 calories per cubic centimeter.

All too frequently seriously ill patients cannot take sufficient food by way of the intestinal tract.

Table 1. Formula for Tube Feeding

Ingredients	Gms. of Protein	Number of Calories
Egg white (4) .....	12	268
Egg yolks (4) .....		
Milk (1,000 cc.) .....	30	675
Evaporated milk (210 cc.) .....	17.5	311
Plain malt 1/6 lb. ....	10.0	307
Dextrin 1/6 lb. ....		307
Sugar 1/6 lb. ....		301
Orange juice (or 100 cc. tomato juice) ..	1.2	40
Total .....	70.7	2,209
Makes a total of 1,500 cc.		

Cook first four ingredients as soft custard.

Add orange or tomato juice after cooking; strain.

Add vitamin concentrates if desired.

One cubic centimeter equals approximately 1.5 calories.

These patients will have to receive protein containing fluids parenterally. Whole blood, human blood plasma, or albumin and protein digest or amino acid mixtures are the fluids usually used for this purpose.

Whipple<sup>27</sup> has shown that in the presence of both an anemia and hypoproteinemia, the administered protein first replaces the protein fraction of hemoglobin. Accordingly, when there is both an anemia and a hypoproteinemia present, whole blood is the infusion of choice. We frequently have noted a diminished tolerance for blood loss at operation in cancer patients. Lyons, Champ and Mayerson<sup>28</sup> recently have demonstrated a generally reduced blood volume in these patients in spite of essentially normal serum protein and red blood cell counts. These observations become of increased importance when one remembers that it has been found that between 200 and 1,000 cc. of blood are lost during most major surgical procedures.<sup>29</sup> From this work and our own clinical observations, whole blood in general is the protein containing fluid of choice.

After the anemia has been corrected one of the other protein containing fluids can be used. Plasma is probably the best source of parenteral protein, excluding whole blood, but because of its cost it has not been found practical to give it in large enough amounts to raise a markedly depleted serum protein. Another disadvantage of plasma is that it contains considerable amounts of sodium chloride and in the presence of hypoproteinemia, so frequently present, may result in edema.

Human albumin at present is still not available for extensive clinical use, and will probably remain too expensive for some time for general use. Theoretically it is excellent as it is replacing the substance that is depleted. It increases the blood osmotic pressure as albumin has an osmotic pressure fifteen times greater than plasma.

Protein digests from casein, liver or brewers yeast are of value as parenteral protein replacements and are being used extensively for this purpose. In a previous study of hypoproteinemia we were unable to prevent the postoperative serum protein decline with this and other protein substances. The serum protein rose only after the patients had been taking food by mouth for several days.<sup>3</sup> The degree of starvation following surgery can be decreased however by the protein digests

and glucose. Elman<sup>30</sup> has reported the maintenance of a positive nitrogen balance following the intravenous use of equal parts of glucose and hydrolyzed casein. If three liters of fluid are given daily postoperatively it is well to include among these one liter of protein digest. It is realized that this will not produce nitrogen balance but will partly decrease the body need for protein during the period of postoperative need.

#### MISCELLANEOUS ADJUNCTS TO CANCER SURGERY

**Vitamin Therapy.**—One only rarely sees specific vitamin deficiency in patients coming to surgery. Correction of vitamin deficiency has been made fairly easy by the numerous vitamin preparations that are available, both for oral and parenteral use. In spite of the inability to demonstrate a specific need for vitamin preparations in our patients because of the anorexia, weight loss or hypoproteinemia usually encountered it seems advisable to give some type of vitamin therapy. It has been our practice to give the vitamin B complex and vitamin C parenterally to all patients upon whom major surgery is anticipated. This is continued during the early postoperative period.

**Gastric Suction.**—Gastric lavage two or three times a day in patients with outlet obstruction or carcinoma of the stomach removes the retained gastric contents, increases the muscular tone of the organ and reduces the edema in the stomach wall. The latter is of great importance in preparing the gastric wall for possible anastomotic procedures. In patients with achlorhydria the instillation of 30 cc. of dilute hydrochloric acid before surgery may reduce the bacterial flora, thus reducing the possibility of infection in case of spillage at the time of surgery.

An indwelling gastric tube with continuous suction inserted after surgery prevents postoperative distension, nausea, vomiting and postoperative "gas pains." Singleton and coworkers,<sup>31</sup> Wangenstein<sup>21</sup> and others have shown that intestinal gases are, for all practical purposes, composed of swallowed air and that gastric suction efficiently employed will recover this air. It seems probable that no one thing has contributed so much to the advancement of abdominal surgery in recent times as the simple procedure of keeping the bowel deflated by continuous suction.

**Retention Catheter.**—It may be necessary in elderly males, who frequently have some prostatic enlargement, to have a retention catheter in place immediately before and for several days following surgery. This is of particular value following pelvic operations in both males and females. The use of spinal anesthesia often will produce some bladder atonia for from twenty-four to thirty-six hours postoperatively. With the use of modern antibiotics "catheter cystitis" is seen only rarely.

**Chest Plate.**—Roentgenograms of the chest before surgery in cancer patients is almost mandatory. It is essential to rule out chest metastases



which would contraindicate anything but restricted palliative procedures, and also contributes to an understanding of the cardiorespiratory apparatus. A preoperative film is also of value during the postoperative period for comparison in event of postoperative atelectasis, pneumonia, pulmonary embolism or congestive heart failure. During the long time follow-up period of cancer patients the preoperative chest film may be of value for comparison in the development of suspicious metastatic chest lesions.

**Antibiotics.**—The important contribution of sulfonamides, penicillin and streptomycin are well established in surgery and will not be discussed in detail. Their use in operations about the head and neck has made it possible to obtain primary healing even in such procedures as combined radical neck dissection and jaw resection in which the mouth organisms are of necessity disseminated over a large raw surface in the neck and face wound. It has been our practice to give penicillin postoperatively after most major surgical procedures. In borderline clean cases and in grossly contaminated cases we frequently give both penicillin or streptomycin and sulfadiazine.

**Biopsy.**—It may be stated as a rule that all accessible lesions coming under suspicion should be biopsied. A preoperative knowledge of the histologic type and grade of the tumor is of special aid as a guide to the type of operation necessary, and the indications for radical treatment are not apt to be overlooked. Surface lesions lend themselves well to this sort of examination but others will depend on endoscopic procedures or curettage.

Subsurface tumors not accessible to endoscopic instrumentation are usually easily accessible to aspiration biopsy. The advantages to be gained by this diagnostic aid should be obvious to anyone, yet it is only infrequently employed. The technic of obtaining tissue for histopathologic study by this method is not difficult but demands attention to detail common to all surgical procedures. Its accuracy may be expected to increase with the experience of the operator. The procedure as used by us, and as recently reported by Ackerman and Meatheringham,<sup>32</sup> is as follows: The skin overlying the tumefaction is cleansed with a skin antiseptic, and the most direct point on the skin for insertion of the needle to contact the tumor is infiltrated with procain. The skin is then nicked with a bistoury (No. 11) blade. This facilitates insertion of the needle and prevents the inclusion of surface epithelium with the tissue from the tumor. A number 17 or 15 sharp, short bevel needle, with obturator in place, is then inserted through the skin nick and the tumor engaged with its point. The obturator is withdrawn as the needle is about to enter the tumor and a 30 or 50 cc. syringe, with its piston coated with surgical lubricant, is attached to the needle. Strong negative pressure is applied to the syringe and the needle is slowly advanced into the tissue with a to and fro rotary motion. The

needle is withdrawn and reinserted several times in different directions through the tumor mass. The negative pressure is released and the syringe removed from the needle. The needle is then withdrawn slowly from the skin. The obturator is reinserted into the needle and the core of tissue ejected onto a small piece of blotting or filter paper. The syringe should be inspected for small fragments of tissue which may have been aspirated into its interior. The absorbent paper with the fragments of tissue is then placed in a fixative solution. The specimen is handled exactly as is other tissue in so far as fixation, clearing, embedding and staining procedures are concerned. For very firm scirrhous masses we recently have been using a Silverman needle as the use of this needle is more satisfactory for this type of lesion.

The procedure is safe, reliable and rapid. Its accuracy approaches that of ordinary biopsy. In reviewing 300 of our tissue samples, a diagnostic error of 11.1 per cent was found.<sup>32</sup> If lymphoid tissue was obtained the percentage error was even smaller. In the interpretation of aspiration biopsies only those showing definitely interpretable tissue are of diagnostic value. If the result is negative for neoplasm and the clinical findings are suggestive, the procedure should be repeated or a conventional biopsy done.

**Anesthesia.**—We have employed spinal anesthesia, utilizing the continuous technic described by Lemmon and Paschal<sup>33</sup> for all operations below the diaphragm for the last six years and have been increasingly impressed by its value. In a previous critical analysis<sup>8</sup> of the results obtained with general ether anesthesia compared with continuous spinal anesthesia, 44 per cent of the former and 77 per cent of the latter were considered to have had satisfactory anesthesia and an immediate postoperative course. Table 2 lists the comparable findings found at that time.

Table 2. Comparison of Continuous Spinal Anesthesia and General Anesthesia

Comparable Factors	Continuous Spinal	General
Satisfactory Anesthesia .....	77%	44%
Hypotension in O. R. ....	10	34
Operative Room Shock .....	2	10
P. O. Atelectasis .....	1	1
Fatal Emboli .....	0	3

We believe that the superiority of continuous spinal anesthesia is due to the following factors:

1. Relaxation is sustained and complete, necessitating less operative trauma. During unforeseen accidents, such as hemorrhage or gross contamination, maintenance of exposure and protective packs can be depended upon.

2. The surgeon is never hurried. Long and extensive procedures are unfortunately most often necessary in patients whose general condition is least able to withstand them. On such occasions it is both essential and gratifying to be able to take time for careful thought and meticulous work without regard to the duration of anesthesia. If surgical trauma or blood loss becomes excessive, re-

sulting in a blood pressure decline, it has been our custom to suspend work while blood or plasma is administered rapidly and the patient is given an opportunity to recover.

3. Continuous spinal anesthesia is of particular advantage in patients with cancer because it inherently provides for the element of uncertainty in all exploratory procedures when the operability must remain in question until the abdomen is opened. In the inoperable patient the small initial dose wears off rapidly, returning the patient, with the exception of the incision, to his original pre-operative state. In the operable case, it provides for continuing unhurriedly during prolonged procedure.

For operations about the oral cavity and neck, local and block anesthesia with procain is particularly well adapted. We frequently perform extensive operations on the neck under unilateral or bilateral cervical plexus block anesthesia. Should the patient become restless, we have found it desirable to give just enough pentothal sodium to produce analgesia. Martin<sup>34</sup> has noted a higher mortality in patients having general anesthesia for neck dissections than when block anesthesia was used. In 196 operations performed under block anesthesia there were three deaths, or a mortality of 1.5 per cent. In fourteen operations under general anesthesia there were two deaths, or a mortality of 14.3 per cent.

It has long been noted that an increase in the spinal fluid pressure occurs during general ether anesthesia. At the time of ligation of the internal jugular vein we also have observed a sharp rise in the intercranial pressure as recorded by a continuous spinal needle and tubing attached to a manometer. The sum of these two intercranial pressure rises, that resulting from general anesthesia plus increased pressure resulting from ligation of the internal jugular vein, frequently may reach figures as high as from 500 to 750 mm. of spinal fluid and occasionally much higher.<sup>35</sup> This increased pressure is not desirable and at times has been fatal. From these observations, in all poor risk patients requiring neck dissections we prefer procain cervical block anesthesia. This type of anesthesia is especially desirable in patients requiring a bilateral neck dissection in whom a tremendous increase in the intercranial pressure results after ligation of the second internal jugular vein.

Many operations about the oral cavity require general anesthesia, e.g., jaw resections. In these cases the use of intratracheal anesthesia is essential. We prefer nitrous oxide induction and ether and oxygen for maintaining anesthesia. These cases, while they frequently may be lengthy and require extensive resections, do not require deep anesthesia as muscular relaxation is not necessary. It must always be remembered that in intratracheal ether anesthesia one is dealing with a tightly closed system and an anesthetic agent which is not metabolized but is excreted primarily

by the lungs. Accordingly, once the anesthetic level is reached, in these cases the first plane of the third stage, the addition of small amounts of ether is all that is required for maintenance.

*Prophylactic Tracheotomy.*—There may be interference with the pharyngeal airway as a result of postoperative swelling following many procedures about the oral cavity. In these cases we routinely do low tracheotomies. After a few days when the edema has subsided the tracheotomy tube can be corked and if the patient tolerates the tube closed for from twenty-four to forty-eight hours it can be removed. The edges of the tracheotomy stoma are apposed by adhesive strapping and will heal without suture within from seven to ten days.

At the close of many of these procedures a Levine tube is passed immediately into the stomach. This provides an initial means of aspirating the stomach during the period of nausea and after from twenty-four to forty-eight hours this same tube can be used for parenteral feedings. If one tries to pass a Levine tube several hours after operation about the oral cavity and neck or the neck it may be quite difficult because of the distortion of the pharynx from the operation and postoperative edema.

*Wound Healing and Abdominal Wound Closure.*—The healing of wounds is of fundamental importance to all surgeons and occasionally determines the success or failure of the final result. Whipple<sup>36</sup> has pointed out that the healing of wounds is a composite biologic phenomenon which conforms in general to the laws of growth, having a latent or lag period and an active period of cell growth.

Wound healing is influenced by many conditions which may be either local or systemic.

Local factors influencing wound healing are: (1) the amount of necrotic and damaged tissue in the borders of the wound, (2) the vascularity of the tissue, the more abundant the blood supply the more rapid is wound healing, other factors being equal, (3) the amount and character of the exudate in the wound and the adjacent tissues, (4) the presence or absence of bacteria and their virulence is a well recognized local factor in wound healing, (5) the number and the character of foreign bodies in the wound to be absorbed or encapsulated, (6) cooling of the tissues, this increasing the lag period in wound healing and decreasing the resistance of the tissues to infection,<sup>37</sup> (7) hydrogen-ion concentration, healthy healing accompanies an alkalinity of approximately pH 7.4,<sup>38</sup> and there is also less pain in wounds that are slightly alkaline, (8) the larger the wound the greater the initial velocity of wound healing; as the wound heals and becomes smaller the velocity decreases.<sup>39</sup>

Systemic factors influencing wound repair are: (1) the age of the tissues, young tissues healing more rapidly than senescent or aging tissues, (2) the state of hydration, either over hydration or dehydration, alters the wound exudate and bordering tissues in a manner that is deleterious to normal



wound repair; hydration of the wound is influenced by the electrolyte and protein content of the blood as well as by the water content, (3) nutritional balance; protein deficiency retards, while a high protein diet accelerates wound healing; a fatty diet prolongs the repair of wounds, (4) vitamin C deficiency has been shown by many workers to prolong the lag period as this vitamin influences the formation of intercellular substances, in the maturation of fibroblasts and in the transformation of fibrous tissue to collagen fibers; a lack of vitamin A also has been shown to retard wound healing, (5) the systemic circulation and the blood picture also exert their influence; poor circulation and severe anemia delay wound healing.

*How surgical Methods Aid or Hinder Healing.*—From the practical standpoint the lag period is the interval between the receipt of the wound and the beginning of the development of tensile strength. During this period the surfaces of the wound must be held together by mechanical means, sutures, splinting or constant pressure. The means of carrying out this function must be with the least damage to the wound surfaces and adjacent tissues, with the maintenance of maximal nutrition, adequate blood supply and minimal foreign body reaction. This is the period in which the surgeon can exert the greatest influence by securing apposition without strangulation, by gentleness in handling tissues, by obliteration of all dead space, by careful hemostasis and by placing a minimal amount of foreign material in the wound.

Large<sup>40</sup> has found that there is a decreasing tolerance to various suture material as follows: fine stainless steel wire, cotton, silk, plastigut, nylon and catgut. In 1942 we first began to use stainless steel wire for abdominal wound closure, and have been impressed increasingly by the results obtained. A recent comparison of the results in wounds closed with catgut to the peritoneum and silk to the fascia, subcutaneous tissues and skin with a similar number of steel wire wound closures showed a total of thirty-seven wound complications in the catgut-silk group and eight in the steel wire group.<sup>4</sup> Table 3 lists the complications seen.

Table 3. Comparison of Steel Wire Closure with Catgut and Silk Closure

Comparable Factors	Steel Wire Closure	Catgut-Silk Closure
Total Complications .....	8	37
Minor Wound Infections .....	6	4
Major Wound Infections .....	0	4
Dehiscence .....	0	7
Eventration .....	0	3
Postoperative Incisional Hernias ....	0	12
Painful Wound .....	1	1
Sinus Tracts .....	1	4

The wire used is an alloy steel wire (No. 28 or 30). The method of placing it in the tissues is as follows: The steel wire stitch goes through both layers of the rectus sheath, the intervening muscle and the peritoneum. The stitch is then brought out through all of the layers on the opposite side of the wound and a second loop is taken to approxi-

mate the anterior fascial layer of the rectus sheath. This is the method originally described by Jones and associates.<sup>41</sup> At times the peritoneum is not apposed accurately by this method, and we then take a loop through the peritoneum before bringing the wire out through the muscular and fascial layers on the opposite side of the wound.

Wound eventration has been eliminated almost completely with this suture material. A through-and-through closure (stay suture) of some non-absorbable suture material has been accepted generally as the best method for closure of disrupted wound.<sup>42, 43, 44</sup> The careful approximation of the fascial layers has been stressed as long ago as 1929 by Howes and associates.<sup>45</sup> The technic described here, employing steel wire, has the combined advantages of a layer closure and of a stay suture. The method eliminates the need for conventional stay sutures.

It has been noted frequently that the interstices in multifilamented suture material act as niduses for the growth of bacteria in contaminated or questionably clean wounds and in the presence of infection may result in sinus tract formation. This possibility is essentially eliminated when steel wire is used. On a number of occasions we have observed granulation tissue covering the steel wire without sinus tract formation in the base of the infected wound where the skin and fat have separated.

We believe the greater success with this type of closure can be attributed to the following factors: (1) The greater tensile strength produces a stronger wound in the immediate postoperative period before wound repair has occurred. (2) Less trauma is necessary and tissue strangulation may be avoided with less difficulty. (3) This, combined with less tissue reaction to the alloy steel, promotes increased resistance to infection and more rapid wound healing.

*Venous Thrombosis.*—Venous thrombosis has been shown to arise in the deep veins below the knee in from 85 to 90 per cent of all cases.<sup>46, 47</sup> If it is recognized when it involves only the veins of the leg and lower thigh it is called phlebothrombosis. If the process has progressed to the femoral and iliac veins it is called thrombophlebitis.<sup>48</sup> Embolism is more likely to occur in the early stages when only the lower leg is involved, at which time there may be a long flagellum of clot floating in the vein. Homans<sup>49</sup> has found that pulmonary embolism called attention to thrombosis more frequently than any other single sign.

A number of investigators have called attention to the increased frequency of this condition in advanced age and in patients suffering from debilitating disease.<sup>50, 51, 52</sup> Gibbon<sup>53</sup> has found, in a review of this subject, that of every 100 postoperative deaths, eight were due to pulmonary embolism.

With the above facts in mind some effective form of prophylactic or definitive therapy seems indicated. Early ambulation, anesthesia of the para-

vertebral lumbar sympathetic system, the use of anticoagulants and venous ligation have been used extensively. While none of these methods is a panacea for venous thrombosis, each has its indications.

Early postoperative ambulation and passive and active exercise have been shown to decrease the incidence of fatal emboli, but still leave much to be desired.

*Anesthesia of the Lumbar Sympathetic Chain.*—Arteriospasm and venospasm both accompany venous thrombosis and probably account for much of the pain in this condition. A lumbar paravertebral block with procain will relieve much of the pain and reduce the edema. This method of treatment is of considerable value in thrombophlebitis but we prefer other methods of treatment in cases of phlebothrombosis. This method is not adaptable to the prevention of venous thrombosis and, of most importance, it will not protect the patient from pulmonary embolism.

*Coagulation Therapy.*—While early mobilization and paravertebral lumbar sympathetic block have both been helpful they still leave much to be desired. The use of anticoagulant drugs to prevent venous thrombosis, and to prevent its spread when it has developed, is basically sound as it is an attempt to control the altered blood clotting mechanism. Its method of utilization and control has been well established and favorable results are reported from several clinics.<sup>46, 54, 55, 56</sup> The two anticoagulants most extensively used have been heparin and dicumarol.

Heparin is a quick acting anticoagulant and Bauer<sup>46</sup> has reported excellent results with its use in patients with clinical signs of venous thrombosis. He has reduced his mortality among thrombotic cases from 18 per cent in conservatively treated patients to 1.4 per cent in heparin treated patients.

Dicumarol takes from twenty-four to forty-eight hours to become effective and has also been used effectively in both the prevention and treatment of venous thrombosis. Barker<sup>56</sup> has reported only one death from pulmonary embolism in the prophylactic treatment of 1,000 patients following various operative procedures.

The combination of these two drugs is most effective when rapid action is desired, as is necessary after venous thrombosis has occurred. If anticoagulants are used after surgery as prophylactic therapy, dicumarol can be used alone, starting the drug from twenty-four to forty-eight hours following surgery. The articles by Bauer,<sup>46</sup> Barker and associates,<sup>56</sup> and de Takets and Fowler<sup>54</sup> should be consulted for details in the administration of these drugs.

It is well to note that dicumarol cannot be used in the presence of renal or hepatic insufficiency, subacute bacterial endocarditis, purpura, blood dyscrasias with bleeding tendencies or following recent operations on the central nervous system.<sup>51</sup> Both of these drugs require daily laboratory studies

for their control and at the present time heparin is quite expensive. Accordingly, we have not found them to be always practical for prophylactic use following surgery and, if one hopes to decrease the tragedies resulting from pulmonary embolism, the treatment used must be applicable to all patients.

*Venous Ligation.*—In view of the fact that from 85 to 90 per cent of pulmonary emboli arise in the deep veins of the legs, the interruption of these veins becomes a logical procedure, especially prophylactically. This procedure has been used by a number of surgeons.<sup>5, 51, 52, 57, 58</sup>

It has been our practice for some time to ligate the superficial femoral veins at the close of all major operations on elderly patients. Younger individuals who are debilitated, anemic, hypoproteinemic, or who have had previous episodes of phlebitis, also have been subjected to this procedure.

The technic of this operation has been described previously<sup>5</sup> and will not be repeated here. The procedure can be performed in from ten to twenty minutes at the end of the major operation. The only untoward effect resulting from this procedure has been transient edema in a few patients.

We have performed this procedure on approximately 250 patients with one death from pulmonary embolism. This patient's embolus was demonstrated at autopsy to have originated from the pelvic veins. Allen<sup>51</sup> reports only one death in 458 patients who had prophylactic superficial femoral vein interruption and compares this with twenty-six deaths in a comparable group of 458 patients in whom the veins were not ligated. In none of his cases has a patient lost life or limb as a result of this procedure. The indications for superficial femoral vein ligation are the presence of phlebothrombosis, following nonfatal emboli and as a prophylactic measure.

In summary we feel that venous interruption probably has its greatest usefulness in ligation of the superficial femoral veins as a prophylactic procedure. Higher ligation as a therapeutic measure may be life saving at times. The greatest shortcoming of vein ligation lies in the fact that it does not eliminate the altered clotting mechanism and will not always prevent pulmonary embolism. Bilateral superficial femoral vein ligation is a practical prophylactic method of preventing embolism for the surgeon who does not have the facilities of a large laboratory. If it can be demonstrated that dicumarol can be administered safely without careful laboratory guidance this drug will become the preferred method for both prophylactic and therapeutic management of venous thrombosis.

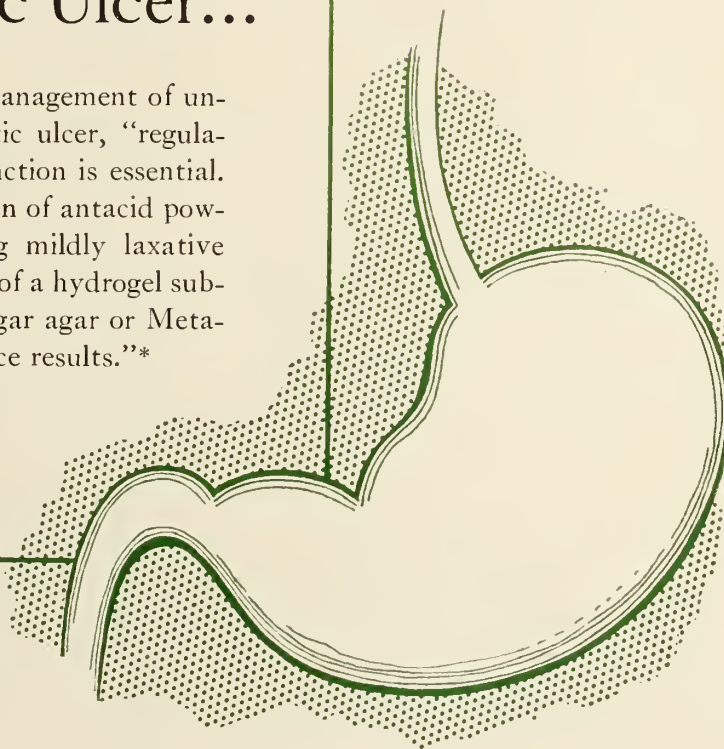
#### SUMMARY

Numerous substitutes for surgery in the treatment of cancer have been and are being explored but, thus far, surgery has accomplished more than all of them combined. Accordingly, the surgical ad-



## Bowel Regulation in Peptic Ulcer...

In the medical management of uncomplicated peptic ulcer, "regulation of bowel function is essential. . . . A combination of antacid powders . . . having mildly laxative effects or the use of a hydrogel substance, such as agar agar or Metamucil, will produce results."\*



By furnishing a water-retaining, gelatinous residue in the large bowel, Metamucil acts gently without irritation to promote smooth, normal evacuation.

## METAMUCIL®

is the highly refined mucilloid of *Plantago ovata* (50%), a seed of the psyllium group, combined with dextrose (50%) as a dispersing agent.



**SEARLE** RESEARCH IN THE SERVICE OF MEDICINE

\*Gerendasy, J.: Modern Treatment of Peptic Ulcer, J. M. Soc. New Jersey 43:84 (March) 1946.

vancements during the last few years have been examined briefly and their special application to the cancer patient stressed. The necessity for careful evaluation of these patients before surgery is pointed out. Some of the factors which must be evaluated are age, cardiovascular renal status, liver function and weight loss. The management of the anemia, hypoproteinemia, water and electrolyte requirement is discussed in the light of our experience and present day treatment. The use of vitamins, gastric suction and antibiotics are reviewed briefly.

The importance of anesthesia in cancer patients is emphasized and our preference for continuous spinal anesthesia for operations below the diaphragm is stressed. In head and neck procedures the use of nerve block anesthesia and endotracheal anesthesia is reviewed. The importance of wound healing and how the surgeon can aid in this process is pointed out. Our preference and results with stainless steel wire for abdominal wound closure are emphasized. Finally, the problem of venous thrombosis which is frequently seen in aged, debilitated patients and the present day methods of treatment are examined briefly.

503 East High Street.

#### BIBLIOGRAPHY

1. Wiley, H. M.: Gastric Ulcer, Benign or Malignant: A review of Recent Literature, *Am. J. Surg.* **65**:104, 1944.
2. Wiley, H. M.: Postoperative Protein Deficiency, With Special Reference to the Cancer Patient, *Surgery* **21**:889, 1947.
3. Wiley, H. M., and Sugarbaker, E. D.: An Evaluation of Abdominal Wound Closure: Steel Wire Layer Closure with Catgut Silk Layer Closure, Early and Late Results, *Surg., Gynec. & Obst.* **85**: 81, 1947.
4. Sugarbaker, E. D.: Control Factors in the Surgery of Cancer Patients, *J. Missouri M. A.* **41**:112 (June) 1944.
5. Wiley, H. M.; Sugarbaker, E. D., and Ossman, J. A.: A Critical Analysis of Recent Methods of Treatment of Thromboembolic Disease. To be published.
6. Sugarbaker, E. D.: Coincident Removal of Additional Structures in Resections for Carcinoma of the Colon and Rectum, *Ann. Surg.* **123**:1036, 1946.
7. Cooper, G. W. II; Zumwalt, W., and Sugarbaker, E. D.: A Limited Comparison of Continuous Spinal and General Ether Anesthesia, *Surgery* **16**:886, 1944.
8. Nash, J.: *Surgical Physiology*, Chas. C. Thomas Co., Springfield, Ill., 1942.
9. Ivy, A. C., and Roth, J. A.: Why Do a Liver Function Test? *Gastroenterol.* **1**:655, 1943.
10. Boyce, F. F.: The Role of the Liver in Surgery, *South. Surg.* **10**:56, 1941.
11. Cole, W. H.; Keeton, R. W.; Calloway, N. O.; Glickman, N.; Mitchell, H. H.; Dyniewicz, J., and Howes, D.: Studies in Postoperative Convalescence, *Ann. Surg.* **126**:592, 1947.
12. Morton, J. J.: The Cancer Problem, *J. A. M. A.* **135**:957, 1947.
13. Robillard, G. L., and Shapiro, A. L.: Preparation for Operation and Postoperative Care of the Patient with Cancer, *Arch. Surg.* **44**:840, 1942.
14. Clark, J. H.; Nelson, W.; Lyons, C.; Mayerson, H. S., and De Camp, R.: Chronic Shock: The Problem of Reduced Blood Volume in the Chronically Ill Patient, *Ann. Surg.* **125**: 618, 1947.
15. Lyons, Champ, and Mayerson, H. S.: The Surgical Significance of Hemoglobin Deficiency in Protein Depletion, *J. A. M. A.* **135**:9, 1947.
16. Marriott, H. L., and Kekwick, A.: Volume and Rate in Blood Transfusion for Relief of Anemia, *Brit. M. J.* **1**:1043, 1940.
17. Bruneau, J., and Graham, E. A.: Caution Against Too Liberal Use of Citrated Blood in Transfusions, *Arch. Surg.* **47**:319, 1943.
18. Harrow, B.: *Textbook of Biochemistry*, pg. 908, 3rd edition, W. B. Saunders Co., Philadelphia, 1944.
19. Maddock, W. G., and Collier, F. A.: Sodium Chloride Metabolism in Surgical Patients, *Ann. Surg.* **112**:520, 1940.
20. Collier, F. A.; Iob, Vivian; Vaughan, H. H.; Kalder, N. B., and Moyer, C. A.: Translocation of Fluid Produced by the Intravenous Administration of Isotonic Salt Solutions in Man Postoperatively, *Ann. Surg.* **122**:663, 1945.
21. Wangenstein, O. H.: *Intestinal Obstruction*, 2nd Edition, Charles C. Thomas, Baltimore, 1942.
22. Bartlett, W. Jr.: The Hydration of Hyperthyroid Patients and Its Relationship to Edema, Especially Cerebral, *Surg., Gynec. & Obst.* **71**:45, 1940.
23. Cannon, P. R.: Amino Acid Utilization in the Surgical Patient, *J. A. M. A.* **135**:1043, 1947.
24. Zintel, H. A.: The Role of Nutrition in Preoperative and Postoperative Care; Review, *Am. J. M. Sc.* **207**:253, 1944.
25. Ravdin, I. S.: Hypoproteinemia and Its Relation to Surgical Problems, *Ann. Surg.* **112**: 576, 1940.
26. Casten, D.; Bodenheimer, M., and Barcham, I.: A Study of Plasma Protein: Their Production, Utilization and Interrelation, *Am. J. M. Sc.* **203**:477, 1942.
27. Whipple, G. H.: Hemoglobin and Plasma Proteins: Their Production, Utilization and Interrelation, *Am. J. M. Sc.* **203**: 477-489, 1942.
28. Cannon, P. R.; Wissler, R. W.; Woolridge, R. L., and Benditt, E. P.: The Relationship of Protein Deficiency to Surgical Infection, *Ann. Surg.* **120**:514, 1944.
29. Collier, F. A.; Crook, C. E., and Iob, Vivian: Blood Loss in Surgical Operations, *J. A. M. A.* **126**:1, 1944.
30. Elman, R.: Acute Starvation Following Operation or Injury: With Special Reference to Caloric and Protein Needs, *Ann. Surg.* **120**:350, 1944.
31. Singleton, A. O.; Funston, R., and Houston, F. G.: The Problem of Intestinal Gases Complicating Abdominal Surgery, *Ann. Surg.* **115**:921, 1942.
32. Meatheringham, R. E., and Ackerman, L. V.: Aspiration Biopsy of Lymph Nodes, *Surg., Gynec. & Obst.* **84**:1071, 1947.
33. Lemmon, W. T., and Paschal, G. W., Jr.: Controllable, Intermittent Spinal Anesthesia, *Surg., Gynec. & Obst.* **74**:948, 1942.
34. Martin, H.: The Treatment of Cervical Metastatic Cancer, *Ann. Surg.* **114**:972, 1941.
35. Sugarbaker, E. D., and Wiley, H. M.: Unpublished Data.
36. Whipple, A. O.: Burns, Shock, Wound Healing and Vascular Injuries, p. 177, W. B. Saunders Co., Philadelphia, 1943.
37. Large, A., and Heinbecker, P.: Effect of Cooling on Wound Healing, *Ann. Surg.* **120**:727, 1944.
38. Messer, F. C., and McClellon, R. M.: Surgical Maggots: A Study of Their Function in Wound Healing, *J. Lab. & Clin. Med.* **20**:1219, 1935.
39. Holmes, A. D.: Wound Healing, *N. England J. Med.* **227**: 909, 1942.
40. Large, O. P.: Comparison of Tissue Reactions From New Sutures, *Am. J. Surg.* **60**:415, 1943.
41. Jones, T. E.; Newell, E. T., Jr., and Brubaker, R. E.: The Use of Alloy Steel Wire in the Closure of Abdominal Wounds, *Surg., Gynec. & Obst.* **72**:1056, 1941.
42. Glenn, F., and Moore, S. W.: The Disruption of Abdominal Wounds, *Surg., Gynec. & Obst.* **72**:1041, 1941.
43. Holman, C. W., and Eckel, J. H.: Prevention of Wound Disruption with Through-and-Through Silver Wire Stay Sutures, *Surg., Gynec. & Obst.* **72**:1052, 1941.
44. Reig, M. R.; Zininger, M. M., and Merrell, P.: Closure of the Abdomen with Through-and-Through Silver Wire in Cases of Acute Abdominal Emergencies, *Ann. Surg.* **98**:890, 1933.
45. Howes, E. L.; Sooy, J. W., and Harvery, S. C.: The Healing of Wounds as Determined by Their Tensile Strength, *J. A. M. A.* **92**:42, 1929.
46. Bauer, G.: Heparin Therapy in Acute Deep Venous Thrombosis, *J. A. M. A.* **131**:196, 1946.
47. Frykholm, R.: Pathogenesis and Mechanical Prophylaxis of Venous Thrombosis, *Surg., Gynec. & Obst.* **71**:307, 1940.
48. Ochsner, A., and De Bakey, M.: Therapeutic Considerations of Thrombophlebitis and Phlebothrombosis, *N. England J. Med.* **225**:207, 1941.
49. Homans, J.: Diseases of the Veins, *N. England J. Med.* **235**:163, 167-193, 198 (Aug. 1, 8) 1946.
50. Veal, J. R., and Hussey, H. H.: Surgery of Deep Venous Thrombosis of the Lower Extremity, *Surgery* **17**:218, 1945.
51. Allen, A. W.: Interruption of the Deep Veins of the Lower Extremities in the Prevention and Treatment of Thrombosis and Embolism, *Surg., Gynec. & Obst.* **84**:519, 1947.
52. Meigs, J. V., and Ingersoll, F. M.: Thrombophlebitis and Phlebothrombosis in Gynecology Patients; the Prophylaxis recognition and treatment, *Am. J. Obst. & Gynec.* **52**:938, 1946.
53. Gibbon, J. H. Jr.: Pulmonary Embolism: Review of Recent Contributions, *Pennsylvania M. J.* **42**:877, 1939.
54. de Takets, G., and Fowler, E. F.: The Problem of Thrombo-Embolism, *Surg.* **17**:153, 1945.
55. Loewe, L., and Rosenblatt, P.: A New Practical Method for Subcutaneous Administration of Heparin, *Am. J. M. Sc.* **208**:54, 1944.
56. Barker, N. W.; Cromer, H. E.; Hurn, M., and Waugh, J. M.: The Use of Dicumarol in the Prevention of Postoperative Thrombosis and Embolism with Special Reference to Dosage and Safe Administration, *Surgery* **17**:207, 1945.
57. Homans, John: Deep Quiet Venous Thrombosis in the Lower Limb, *Surg., Gynec. & Obst.* **79**:70, 1944.
58. Fine, J., and Starr, Arnold: The Surgical Therapy of Thrombosis of the Deep Veins of the Lower Extremities, *Surgery* **17**:232, 1945.

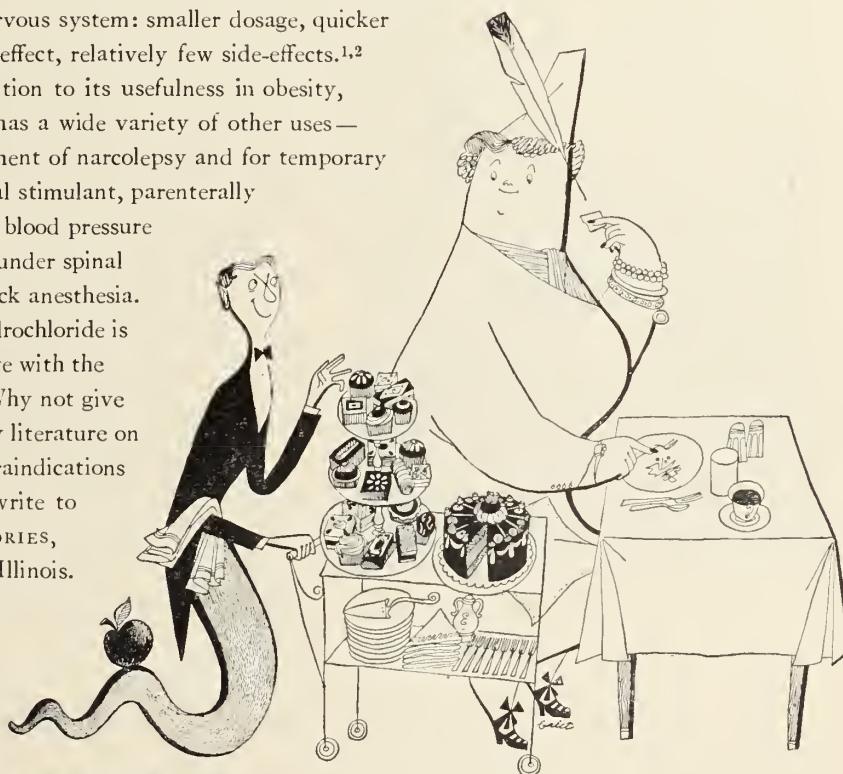


# WHEN SHE'S TEMPTED BY FORBIDDEN FOODS...

What's a woman to do? She's tired of dieting. The vision of new health and a better figure faded with the first 10 pounds . . . and now all she can see wherever she goes is food, food, tempting food. • To depress her appetite, one 2.5-mg. tablet an hour before breakfast and lunch

is usually sufficient, with perhaps a third tablet in midafternoon if it does not cause insomnia. The stimulating action of DESOXYN also elevates the mood and increases the desire for activity. • Investigators who have used DESOXYN extensively claim that it has these advantages over other sympathomimetic amines in producing euphoria and stimulation of the central nervous system: smaller dosage, quicker action, longer effect, relatively few side-effects.<sup>1,2</sup>

• In addition to its usefulness in obesity, DESOXYN has a wide variety of other uses — orally in the treatment of narcolepsy and for temporary use as a mental stimulant, parenterally to maintain blood pressure during surgery under spinal or regional block anesthesia. • DESOXYN Hydrochloride is safe and effective with the correct dosage. Why not give it a trial? For new literature on indications, contraindications and dosage, write to ABBOTT LABORATORIES, North Chicago, Illinois.



PRESCRIBE

**DESOXYN<sup>®</sup>**  
HYDROCHLORIDE  
(Methamphetamine Hydrochloride, Abbott)

TABLETS, 2.5 and 5 mg.

ELIXIR, 20 mg. per fluidounce.

AMPOULES, 20 mg. per cc.

1. Ivy, A. C., and Goetzl, F. R. (1943), d-Desoxyephedrine; A Review, War. Med., 3:60, January.  
2. Davidoff, E. (1943), A Comparison of the Stimulating Effect of Amphetamine, Dextroamphetamine and Dextro-N-Methyl Amphetamine (Dextro-Desoxyephedrine), Med. Rec., 156:422, July.

## PRESIDENT'S PAGE

The Ninety-first Annual Session will take place in Kansas City, March 27 to 30.

An outstanding scientific program has been arranged by the Committee



on Scientific Work. The Committee has followed the requests of the members in the type of discussions to be presented. As a result, the program is truly "your program."

Dr. Andrew C. Ivy, Vice President, University of Illinois, will speak at the Annual Banquet, Monday, March 28. His subject will be "The Dangers of State Medicine."

An outstanding entertainment program has been arranged by the Jackson County Medical Society for Tuesday evening, March 29. All

who register at the Session are invited to attend.

Remember the dates, March 27 to 30. The President Hotel is headquarters. Make your reservation now.

*Robert Muller, M.D.*



# THE JOURNAL

of the

Missouri State Medical Association

623 Missouri Bldg. Telephone: Newstead 0404-05

Subscription . . . \$3.00 a year in advance

*Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent.*

MARCH, 1949

## EDITORIALS

### ANNUAL SESSION

The Ninety-first Annual Session of the Association, to be held in Kansas City, March 27 through March 30, will convene before another issue of THE JOURNAL is published. An attempt has been made to give members as much information as possible in this issue. Together with the program and information about the session, a reservation page on hotels is given and members are urged to make their reservations immediately.

The Jackson County Medical Society will be host at an entertainment on Tuesday evening, plans for which are not complete and full information cannot be given.

Attention of members is called to meetings that will be held just prior to the Annual Session and programs of most of these meetings are given in this issue. The Missouri Heart Association will have a dinner meeting on Sunday evening with a distinguished speaker which will take the place of the dinner formerly held by the Committee on Cardiac Diseases of the Association. The Kansas City Dermatological Society and the St. Louis Dermatological Society will have a dinner meeting Sunday and the Missouri Trudeau Society will have a dinner that evening. A dinner for presidents and secretaries of county medical societies will adjourn in time for those in attendance to hear speakers at the other dinner meetings.

As has been pointed out, the scientific program has been based on requests of the members and it is felt is one of the most practical and valuable that the Association has ever presented.

### PROGRAM OF THE AMERICAN MEDICAL ASSOCIATION FOR THE ADVANCEMENT OF MEDICINE AND PUBLIC HEALTH

Representatives of the Missouri State Medical Association attended a meeting in Chicago on February 12 of the American Medical Association Coordinating Committee for the Protection of the People's Health. This committee was created at the last session of the House of Delegates to assist in the educational campaign which will be conducted by the American Medical Association.

The American public will be advised of the advantages of the present system of medical care and the improvements which will take place in the future.

The public relations firm of Whitaker and Baxter of California has been employed to direct the educational campaign. Special emphasis is to be placed on the development of voluntary prepayment medical care and hospitalization plans. A great part of the funds which will be secured through the assessment of \$25.00 on each member of the American Medical Association is to be devoted to making the public aware of the official program of the American Medical Association. The twelve point program of American medicine for the advancement of medicine and public health follows:

#### A Federal Department of Health

1. Creation of A Federal Department of Health of Cabinet status with a Secretary who is a Doctor of Medicine, and the coordination and integration of all federal health activities under this Department, except for the military activities of the medical services of the armed forces.

#### Medical Research

2. Promotion of medical research through a National Science Foundation with grants to private institutions which have facilities and personnel sufficient to carry on qualified research.

#### Voluntary Insurance

3. Further development and wider coverage by voluntary hospital and medical care plans to meet the costs of illness, with extension as rapidly as possible into rural areas. Aid through the states to the indigent and medically indigent by the utilization of voluntary hospital and medical care plans with local administration and local determination of needs.

#### Medical Care Authority With Consumer Representation

4. Establishment in each state of a medical care authority to receive and administer funds with proper representation of medical and consumer interest.

#### New Facilities

5. Encouragement of prompt development of diagnostic facilities, health centers and hospital services, locally originated, for rural and other areas in which the need can be shown and with local administration and control as provided by the National Hospital Survey and Construction Act or by suitable private agencies.

#### Public Health

6. Establishment of local public health units and services and incorporation in health centers and local public units of such services as communicable disease control, vital statistics, environmental sanitation, control of venereal diseases, maternal and

child hygiene and public health laboratory services. Remuneration of health officials commensurate with their responsibility.

#### Mental Hygiene

7. The development of a program of mental hygiene with aid to mental hygiene clinics in suitable areas.

#### Health Education

8. Health education programs administered through suitable state and local health and medical agencies to inform the people of the available facilities and of their own responsibilities in health care.

#### Chronic Diseases and the Aged

9. Provision of facilities for care and rehabilitation of the aged and those with chronic disease and various other groups not covered by existing proposals.

#### Veterans' Medical Care

10. Integration of veterans' medical care and hospital facilities with other medical care and hospital programs and with the maintenance of high standards of medical care, including care of the veteran in his own community by a physician of his own choice.

#### Industrial Medicine

11. Greater emphasis on the program of industrial medicine, with increased safeguards against industrial hazards and prevention of accidents occurring on the highway, home and on the farm.

#### Medical Education and Personnel

12. Adequate support with funds free from political control, domination and regulation of the medical, dental and nursing schools and other institutions necessary for the training of specialized personnel required in the provision and distribution of medical care.

---

#### "BUY BRITISH"

The following appeared under "The Catalyst" in the January 15 issue of the *Jackson County Medical Society Weekly Bulletin*, written by J. Phil. Edmundson, M.D.

"In a recent radio broadcast, Samuel B. Pettigill 'The Gentleman from Indiana,' comments upon the sad state of Britain's system of Socialized Medicine. Says he: 'Britain's Minister of Health, Mr. Bevan, is amazed at the "bad sight" which his countrymen are developing. The rush for spectacles is so great that it has overtaken production capacity.' One might well question the vision of the planners of such a system in the first place. Manifestly it was somewhat less than 20/20.

"In a more recent news item, as reported by the

Associated Press, Mr. Bevan was accused of unfairness in passing out glasses under the socialized national health law. A Dr. Edward Erdei wrote in the *British Medical Journal* that the Ministry is refusing free spectacles to all persons whose pupils are more than 2.8 inches apart. Said he: 'Wider-set eyes are not accepted by the Ministry as probably not conforming with the specifications of the human race as laid down by one of its committees.'

"Well, we expected quite a distance to occur between the promises and the fulfillment of Britain's health plan, but we did not think it would so soon affect pupillary distance. If, in fact, Mr. Bevan's 'amazement' at his countrymen's visual deficiencies is of the 'wide-eyed' variety, even this estimable gentleman's own spectacles may soon require adjustment, and out of his own pocket! However, as we understand it, the fitting of glasses somewhat involves the matter of frames, and it becomes quite evident the British people were 'framed' long before spectacles entered the picture. "Not quite comparable, but nevertheless reminding of government bungling, we recall our own late lamented Prohibition Act. Under its beneficent mandates distilled spirits were legally recognized as medicinal agents, and, as such, were prescribed and dispensed by physicians and druggists, respectively. Medicines, being designed and intended for the cure or alleviation of disease, it is a natural assumption medical men would be the logical ones to determine how they should be used. But did the Government regard the matter in this light? Not by a jugful, Brother. Uncle Sam said that one pint of 'likker' had to last a patient ten days, come hell or high water, and neither double pneumonia nor double indemnity could change it a single ounce."

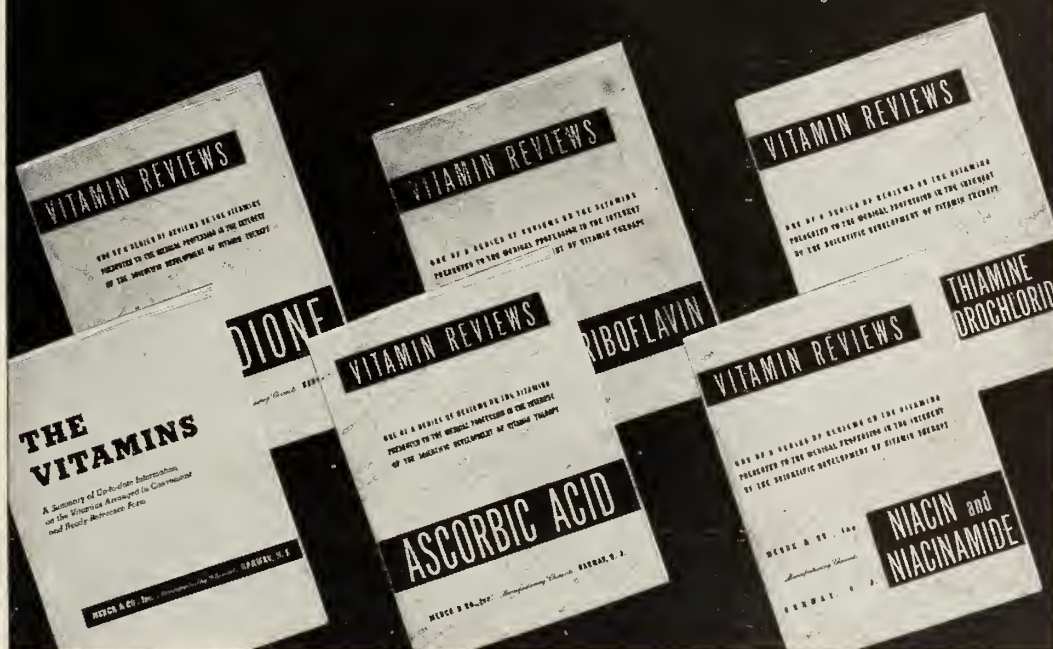
"It may well be argued that Spiritus Frumenti, purely as a therapeutic agent, is readily expendable, but this in no wise affects the principles governing such matters. If the politicians and bureaucrats are to set up a system of standards by which we or the British are to practice medicine, the implications are so far reaching as to stun the imagination. Already British ophthalmologists are having the tools of their trade interfered with. What if this 'standardization' should be carried to its logical conclusion?

"Once the pupillary distance allowed under the law be fixed, why not the length, let us say, of ureteral catheters? There is no good reason, within such logic, why the distance allowable between the kidney and the bladder should not likewise become a matter of law. Or the size and length of Graves' specula, which would affect us personally, to say nothing of the dear ladies who expect us to use both gentleness and judgment in such delicate matters. This may stretch—pardon us—the imagination somewhat, but if it is Socialized Medicine you want, and that is exactly what is proposed by our own Mr. Ewing in his Compulsory Health Insurance Plan, then by all manner of means—"Buy British."



# LATEST VITAMIN FACTS

*From Merck—where many of the vitamin factors were first synthesized.*



These six Merck *Vitamin Reviews* are yours for the asking while the editions last. These concise reviews contain up-to-date, authoritative facts and can be most useful for quick reference. Please address requests for copies to Merck & Co., Inc., Rahway, N. J.

## PARTIAL INDEX OF CONTENTS

- Factors that produce avitaminosis.
- Signs and symptoms of deficiency.
- Daily requirements and dosages.
- Distribution in foods.
- Methods of administration.
- Clinical use in specific conditions.

# MERCK VITAMINS



MERCK & CO., Inc.

*Manufacturing Chemists*

RAHWAY, N. J.

## A GUARANTEED INCOME For Professional Men Against Disability

Due to Accidents, Sickness, Total Disability

Accidental Death and Loss of Hands, Feet or Eyes

**NO CANCELLATION CLAUSE** (Standard Provision No. 16)

**NO TERMINATING AGE** (Standard Provision No. 20)

**& GUARANTEED RENEWABLE FEATURES PROVIDED**

### FIRST DAY TO LIFETIME BENEFITS

**DISABILITIES OCCURRING PRIOR TO AGE 60**

Accidents or Confining Sickness

*When Hospital Confined*

**\$ 800** first month benefit

**\$1000** second month benefit

**\$1000** third month benefit

*When Not Hospital Confined*

**\$400** monthly 1st year (**\$200** 1st month)

**\$400** monthly 2nd year

**\$300** monthly thereafter for life

**DISABILITIES OCCURRING AFTER AGE 60**—\$100 less 1st year after 1st month and \$150 less thereafter exclusive of Hospital Benefits.

Non Pro-Rating

Non-Assessable

Non-Aggregate

## CONTINENTAL CASUALTY COMPANY

PROFESSIONAL GROUP DEPT., *Intermediate Division*

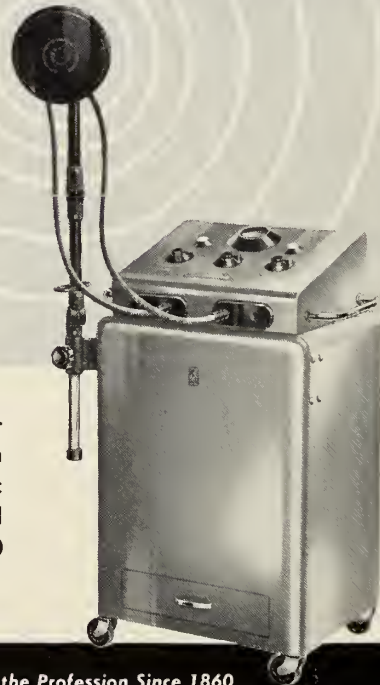
30 E. ADAMS, CHICAGO 3, ILL.

# aloetherm

newest and finest in  
crystal controlled  
short wave  
diathermy

**20F7300**—Full type approval No. D-482 awarded the Aloetherm by the F. C. C. complete with Electromagnetic Treatment Drum, Electromagnetic Inductance Cable with Spacers, Flexible Arm, and Line cord.....\$595.00

Write for illustrated literature.



A. S.



COMPANY

*Serving the Profession Since 1860*

1831 Olive Street • St. Louis 3, Missouri



## NEWS NOTES

C. E. Hyndman, M.D., St. Louis, was installed as president of the St. Louis Surgical Society at the annual meeting of the society on January 19.

Sylvia Allen, M.D., Kansas City, addressed a combined meeting of the primary and intermediate divisions of Johnson County Teachers Association at Olathe, Kansas, on January 15.

R. Lee Cooper, M.D., Warrensburg, spoke on "Socialized Medicine" at a meeting of the Lions Club in Warrensburg in December.

J. Harvey Jennett, M.D., Kansas City, spoke at a meeting of the Optimist Club in Independence in December on "Voluntary Provisions for Health Care."

Herbert L. Mantz, M.D., Kansas City, represented the National Tuberculosis Association at a meeting of the Latino-Americana De Sociades De Tisiologia in Mexico City on January 23 to 29.

A. E. Spellman, M.D., Smithville, was guest speaker at a meeting of the Rotary Club of Lathrop in December and spoke on Blue Cross and Blue Shield Plans.

E. T. Gibson, M.D., Kansas City addressed a meeting of the Sorosis Club of Sedalia on January 17.

Damon O. Walthall, M.D., and Philip L. Byers, M.D., Kansas City, were on the program of the Miami County Medical Society in Paola, Kansas, early in February.

H. R. McCarroll, M.D., St. Louis, was elected treasurer of the American Academy of Orthopedic Surgeons at a recent annual meeting of the academy in Chicago.

Carl F. Vohs, M.D., St. Louis, has been appointed by the Council on Medical Service of the American Medical Association on the Blue Shield Commission of the Associated Medical Care Plans.

W. A. Bloom, M.D., Fayette, spoke at a luncheon meeting of the Sedalia Life Underwriters in Sedalia on February 5 on "Socialized Medicine."

The Missouri Society for Neurology and Psychiatry will hold its annual spring meeting in conjunction with the Kansas Psychiatric Society and the Midcontinent Psychiatric Association in Kansas City on Saturday and Sunday, March 26 and 27. The Saturday's meeting and the annual dinner Saturday night will be held at Hotel President. The sessions on Sunday will be at the Municipal Auditorium. Among the speakers are Winfred Overhol-

ser, M.D., Washington, D. C.; Walter Abbott, M.D., Des Moines, Iowa; Frank Koenig, M.D., Kansas City; F. A. Carmichael, Jr., M.D., Kansas City; Leland B. Alford, M.D., St. Louis; Leopold Hofstatter, M.D., St. Louis, and Paul L. Barone, M.D., Nevada. All interested physicians are invited to attend.

## MUSINGS OF THE FIELD SECRETARY

The fourth national Annual Conference on Rural Health sponsored by the Committee on Rural Medical Service of the American Medical Association in cooperation with national farm organizations held in Chicago February 4 and 5 brought to light a definite advancement in mutual understanding on the part of most of the organizations represented as to the causes of many rural health problems and means for their solutions. There were some divergent ideas expressed during the discussion but these served to stimulate constructive arguments instead of past antagonisms.

The following remarks represent the gist of some statements expressed by participants of the Conference:

The lack of physicians in certain areas will not be solved by legislation.

Getting young doctors back to home states for internships increases the chances for their locating in those states.

Medical relationships between all doctors and particularly between general practitioners and specialists should receive more attention in the medical school curricula.

The two year medical school of South Dakota sends out its second year students during the last month of the school year to work with and under direction of rural practitioners.

Hospitals can be built in small communities to meet the ordinary medical and surgical care needs for much less if federal aid and grandiose regulations are left out of the picture.

In one state where preceptorship training is in vogue an instance or two was mentioned where the preceptors had taken a vacation for four or five days leaving third and fourth year medical students practicing without a license.

How about having farm leaders talk to groups of medical students concerning features of rural practice?

Community environment and economic considerations are the major factors which influence doctors as to their locations.

The reason the federal government is invading so called states rights is that the states have not taken care of their obligations to the people.

Specialization is inevitable as more scientific knowledge becomes available. Some disadvantages of specialization (1) high cost, (2) dilutes patient-physician relationship and is more impersonal.

Good roads and other factors which tend to cause doctors to locate in centers where patients

have to come longer distances tends to impersonalize medical services.

The general practitioner should be the quarterback on the health care team.

More knowledge of psychiatry and medicine will be needed to care for the aging population.

A sellers market is evident in the practice of medicine today.

How does one get people to want to do something about good health?

It seems that the pendulum is now swinging from specialization toward general practice.

A number of medical schools and hospitals are now offering special training for general practice.

Some sort of associated practice in rural areas is necessary in order to take advantage of post-graduate training, to secure time for family life, vacations, civic responsibilities and to have available medical consultation.

The general practitioner must know and observe his limitations.

It was pointed out that in some areas of various states cooperative hospitals were serving a great need.

The care of the general practitioner in a specific case should be continuous.

Many communities will have to exert efforts in face lifting in order to enhance their attractiveness for securing resident physicians.

The National Farm Bureau Federation has officially taken a stand against National Compulsory Health Insurance.

There is nothing the government can do for the health of the people with compulsory health insurance that people cannot do better for themselves with voluntary health insurance and do it cheaper.

State and local health councils can be effective in improving community health and can promote, and rightly so, voluntary prepay hospitalization and medical surgical plans.

Of the often spoken of 325,000 deaths per year, 200,000 probably could be saved if basic public health coverage services were available in all com-

munities throughout the United States. Another 40,000 could be saved if all accidents could be eliminated. Therefore, about 240,000 of these 325,000 deaths can be said not to be influenced by medical care as such.

Most states need to adopt effective means of controlling brucellosis as this disease is not only causing much human suffering and loss of productivity but is costing millions of dollars in the loss of livestock production.

---

## DEATHS

---

**Russell, Richard Lee, M.D.**, Ashland, graduate of the Kansas City Medical College, 1905; honor member of the Boone County Medical Society; aged 72; died December 24.

**Bridges, Andrew D., M.D.**, Portland, a graduate of the College of Physicians and Surgeons, Keokuk, Iowa, 1890; honor member of the Callaway County Medical Society; aged 94; died December 26.

**Knappenberger, George E., M.D.**, Kansas City, a graduate of the University of Kansas School of Medicine, 1911; Fellow of the American Medical Association; member of the Jackson County Medical Society; aged 60; died December 27.

**Hyde, Frank, M.D.**, Eminence, a graduate of Marion-Sims College of Medicine, 1895; Fellow of the American Medical Association; member of the Carter-Shannon County Medical Society; aged 77; died January 9.

**Shrader, Eugene W., M.D.**, Moberly, a graduate of the Missouri Medical College, St. Louis, 1895; honor member of the Chariton-Macon-Monroe-Randolph County Medical Society; aged 76; died January 14.

**Bansbach, Joseph J., M.D.**, St. Joseph, a graduate of the Ensworth Medical College, St. Joseph, 1898; Fellow of the American Medical Association; honor member of the Buchanan County Medical Society; aged 73; died January 19.

**Wooldridge, Alexander G., M.D.**, Butler, a graduate of Washington University School of Medicine, 1932; member of the Bates County Medical Society; aged 43; died January 26.

**Moreland, George H., M.D.**, Kansas City, a graduate of the University of Louisville School of Medicine, 1917; member of the Jackson County Medical Society; aged 64; died January 26.

## ORGANIZATION ACTIVITIES

### MISSOURI STATE MEDICAL ASSOCIATION

#### 91st Annual Session, Municipal Auditorium, Kansas City

The Ninety-first Annual Session of the Association convenes at the Municipal Auditorium, Kansas City, Sunday, Monday, Tuesday and Wednesday, March 27, 28, 29 and 30, 1949. Dinner and luncheon meetings will be held at Hotel President. Several societies will hold sessions just prior to the Association meeting and members are invited to attend these sessions. Programs of several of these meetings appear in this issue of The Journal.

#### TIME AND PLACE OF MEETINGS

##### Sunday, March 27

- 12:30 p. m. Registration. Arena, Municipal Auditorium.
- 2:00 p. m. House of Delegates. Little Theatre, Municipal Auditorium.
- 6:00 p. m. Dinner for Presidents and Secretaries of County Medical Societies. Aztec Room, Hotel President.



**Monday, March 28**

- 8:30 a. m. Registration. Arena, Municipal Auditorium.
- 9:30 a. m. Scientific Session. Little Theatre, Municipal Auditorium.
- 12:00 noon. Missouri Heart Association Round Table Luncheon. Aztec Room, Hotel President.
- 2:00 p. m. Scientific Session. Little Theatre, Municipal Auditorium.
- 4:30 p. m. House of Delegates. Little Theatre, Municipal Auditorium.
- 7:30 p. m. Annual Banquet in Honor of Past Presidents. Ballroom, Hotel President.

**Tuesday, March 29**

- 8:30 a. m. Registration. Arena, Municipal Auditorium.
- 9:30 a. m. Scientific Session. Little Theatre, Municipal Auditorium.
- 12:00 noon. Alumni of the University of Missouri School of Medicine Luncheon Meeting. Hotel President.
- 2:00 p. m. Scientific Session. Little Theatre, Municipal Auditorium.

**Wednesday, March 30**

- 8:30 a. m. Registration. Arena, Municipal Auditorium.
- 9:30 a. m. Scientific Session. Little Theatre, Municipal Auditorium.
- 1:30 p. m. House of Delegates. Little Theatre, Municipal Auditorium.

**SCIENTIFIC PROGRAM OF GENERAL MEETINGS**

**Monday, March 28, 1949, 9:30 a. m., Little Theatre, Municipal Auditorium**

**Symposium on Coronary Disease**

- 9:30 a. m. Pathology of Coronary Artery Disease, Joseph T. Roberts, M.D., Batavia, New York.

Mechanisms leading to coronary artery insufficiency include: (1) proliferative, thrombotic, embolic, hemorrhagic or vasospastic lesions which narrow or occlude the major coronary arteries or their ostia; (2) narrowing of collateral anastomoses to a previously stenosed vessel; (3) increase in the demand for coronary arterial flow or oxygen supply; (4) decrease in the oxygen-carrying power of coronary capillary blood; (5) decrease in the oxygen utilization by the myocardial fibers.

Factors precipitating these mechanisms include: (1) heredity; (2) obesity; (3) cholesterol metabolism; (4) dehydration; (5) subintimal hemorrhage or atheromatous plaques; (6) anemia; (7) diabetes mellitus; (8) excessive exercise; (9) shock; (10) cardiac hypertrophy; (11) possibly smoking or vasoconstrictive drugs; (12) intrapulmonary diseases; (13) arrhythmias and valvular disorders.

Myocardial infarction, angina pectoris and coronary insufficiency are contrasted as phases in the severity of the effects of these mechanisms and factors. Typical and unexpected manifestations are discussed, especially in younger people (less than 40 years of age). Vasospastic peripheral neuropathy is presented as an explanation for cardiac referred pain.

Treatment, discussed in the light of these basic problems includes the use of (1) supervised rest; (2) dietary precautions; (3) anticoagulants; (4) vasodilating drugs or surgery; (5) revascularization by the author's method of connecting aortic and coronary branches; (6) a temporary artificial heart; (7) oxygen; (8) digitalis, quinidine and other drugs.

- 10:00 a. m. Electrocardiographic Changes in Coronary Disease, Paul S. Barker, M.D., Ann Arbor, Michigan.

The clinician must consider the electrocardiographic findings as a part of the complete clinical picture. A normal electrocardiogram does not necessarily indicate a normal heart, nor does an abnormal electrocardiogram necessarily indicate serious or progressive heart disease.

In coronary arteriosclerotic heart disease the electrocardiograms are sometimes normal. Often, however, they show changes such as inverted T waves, defective conduction or arrhythmias, which are evidence of cardiac abnormality but are not specific for coronary artery disease. Curves taken during an attack of angina pectoris usually show more specific changes such as transient displacement of the RS-T junction or modifications of the RS-T segment or of the T-wave as a whole.

Acute myocardial infarction usually causes characteristic electrocardiographic changes. The prominent Q waves are often but not always permanent. The displacement of the RS-T segment and the alterations of the T-wave

undergo progressive changes. It is important to obtain repeated curves at intervals of several days in order to establish the diagnosis in doubtful cases and to confirm it in all cases. In acute infarction the changes are progressive; if the changes are not progressive they cannot be attributed to an acute process. Multiple chest leads sometimes reveal evidence of infarction not apparent in the three standard leads. Special chest leads may disclose evidence of postero-lateral or high lateral infarcts, while esophageal leads are of limited usefulness in revealing posterior infarction. Evidence of both old and recent infarcts can sometimes be recognized. The changes of acute myocardial infarction usually can be recognized in the presence of right bundle branch block but not in the presence of left bundle branch block. Old infarcts often are revealed by the persistence of prominent Q waves, but sometimes the curves return to normal. In rare instances acute myocardial infarction fails to cause recognizable electrocardiographic changes. Acute pericarditis, pulmonary embolism and neoplastic or localized inflammatory lesions of the ventricular wall may cause changes resembling in some respects those of myocardial infarction. The electrocardiogram is of inestimable value in the diagnosis of myocardial infarction, but the diagnosis should not be based exclusively upon it.

10:30 a. m. View of Exhibits. Arena, Municipal Auditorium.

11:00 a. m. The Clinical Aspects of Acute Myocardial Infarction, Emmet B. Bay, M.D., Chicago.

The clinical aspects of acute myocardial infarction, when they are classical, need no elaborate review for this audience. The atypical varieties can be confusing to the experienced cardiologist.

So called "silent" coronary occlusion does not occur as often as the literature would lead one to believe but, when it does, it easily can be overlooked. It should be suspected when there is a sudden onset of congestive failure or shock.

The location of the pain in other cases may be quite atypical. A few patients will describe pain limited to the neck, for example. In others, pain may begin as a sensation localized by the patient in the epigastrium. A few patients described pain in the elbows only.

The radiation of the pain may be unusual. Two patients with verified acute myocardial infarction had pain referred to the left leg as well as the left arm. The duration of the pain may be unusually short, although when it is, the attacks are usually multiple and occur without exertion or excitement.

Since anticoagulant and other therapy has been proved to save lives when it is administered early in the course of acute myocardial infarction it is important for the physician to have his "Index of Suspicion" for these atypical forms at a high level.

11:30 a. m. The Use of Anticoagulants in Heart Disease, William T. Foley, M.D., New York.

12:00 noon. Missouri Heart Association Round Table Luncheon. Aztec Room, Hotel President.

2:00 p. m. Undulant Fever, W. W. Spink, M.D., Minneapolis.

Brucellosis has its reservoir in domestic animals, especially cattle, hogs and goats. Therefore, the human disease exists in rural areas. The disease is contracted through the ingestion of unpasteurized milk and by contact with infected animal tissues, secretions and excretions. Clinically, brucellosis is characterized by a febrile illness which, in the acute stages, may mimic influenza. Complications include bone lesions, endocarditis, orchitis, encephalitis and meningitis. A much discussed but little understood and often misdiagnosed diagnosis is so called chronic brucellosis. The diagnosis is based upon the presence of agglutinins in the serum and on positive blood cultures. A positive skin test affords little precise diagnostic information. Advances in the specific treatment of brucellosis include a combination of streptomycin and sulfadiazine and the use of aureomycin.

2:30 p. m. The Role of Psychiatry in General Medicine, Winfred Overholser, M.D., Washington, D. C.

Mental disease has been with us since the dawn of history. However, only recently has it come to general recognition that psychiatry, the specialty which first developed in the mental hospital, has an intimate relation to many of the ailments in the domain of general medicine. "Psychosomatic





# R.U.Q.

Signs and symptoms referable to the right upper quadrant can be clarified by a cardinal diagnostic step—oral cholecystography with PRIODAX.\* With this simple procedure, the diagnosis of chronic gallbladder disease can usually be definitively made or ruled out. Such precision stems from the rapid and almost complete absorption of PRIODAX.

With PRIODAX, the normal gallbladder is clearly and distinctly visualized; whereas nonvisualization or faint visualization almost always indicates cholecystic disease. Due to its optimal radiopacity, gallstones show up well, either as negative shadows (if radiolucent) or as shadows denser than the surrounding PRIODAX (if radiopaque).

## PRIODAX

(BRAND OF IODOALPHONIC ACID—SCHERING)

Patient tolerance to PRIODAX is excellent, untoward reactions such as severe nausea and vomiting are seldom encountered. Loss of the medium is thus avoided and diagnostic accuracy consequently enhanced.

**PACKAGING:** PRIODAX, beta-(4-hydroxy-3, 5-diiodophenyl)-alpha-phenyl-propionic acid, Tablets are available in envelopes containing six 0.5 Gm. tablets (1 dose); boxes of 1, 5, 25 and 100 envelopes. Hospital Dispensing Package containing 4 rolls of 250 tablets each.

\*®

*Schering* CORPORATION • BLOOMFIELD, N. J.

IN CANADA, SCHERING CORPORATION LTD., MONTREAL



PRIODAX

medicine," a term at least one hundred years old, has been rediscovered and developed; it emphasizes the essential unity of the patient, the fact that he may respond to stress in various ways, some clearly recognized as psychologic, while others are masked as various "physical" disorders.

The emotional component of disease is important in general practice, whether one deals with the "neurotic" complaint or with the patient's total (psychologic) response to organic disorder. Some suggestions are offered toward the development of the psychiatric armamentarium of the internist.

3:00 p. m. Modern Surgical Procedures for Carcinoma of the Colon and Rectum, Howard R. Mahorner, M.D., New Orleans.

Surgery of the colon and rectum has changed radically in the last ten years, both in its conception and in its execution. Formerly surgery of the colon was done by operations of several stages. One of the dangers from such operations being peritonitis, preliminary colostomy with decompression of the distal segment of the bowel was considered the method of choice. Today, however, colon and rectal operations involving resections can be done in one stage with risk reduced under that entailed in double procedures.

An important feature of the campaign to eradicate a malignancy of the colon is preliminary preparation, and one of the most important parts of this is to obtain an empty colon. It is also essential to replenish protein and electrolytes and to obtain as far as possible relatively normal figures; but emptiness of the colon lumen is equally important and protein balance must not be obtained at the expense of feeding right up to the time of the operation and having to resect a colon that is not free to intraluminal contents.

Chemotherapy is important, particularly as an operative and postoperative measure and to the lesser extent, as a preoperative preparation measure. In five years the colon or rectum has been resected sixty-nine times, sixty-six times of which were primary resections without preliminary decompressive operations. These operations were all done for malignancy except two segmental resections for megacolon, two for granuloma, one for diverticulitis and one for endometrioma. There have been six deaths in the group.

The selection of an operation for lesions of the rectosigmoid or rectum involve a choice for the specific problem involved. There are several various types of operations, one of which may be the best for a given case. Among the operations of choice for cancer of the rectosigmoid or rectum are either resection of the rectosigmoid or rectum with reestablishment or continuity, abdomino-perineal resections or resections with preservation of continuity by pulling the sigmoid through the anal sphincter.

3:30 p. m. The Problem of Lung Cancer, Francis M. Woods, M.D., Brookline, Massachusetts.

It is well known that primary bronchogenic carcinoma has become one of the major cancer problems in the male. It now ranks in frequency as one of the three most common cancers in the male, along with cancer of the stomach and cancer of the prostate. Some of the most important developments in diagnostic criteria will be discussed together with the results of treatment of a series of more than six hundred patients with primary bronchogenic carcinoma. Statistics are still, admittedly, discouraging. An analysis of these cases shows clearly that if lung cancers can be gotten to surgery sufficiently promptly, in certain groups of them a favorable outlook can be prognosticated. The chances of a five year cure in a patient with epidermoid carcinoma grades I or II with no lymphatic metastases at the time of operation appears to be excellent.

4:00 p. m. View of Exhibits, Arena, Municipal Auditorium.

4:30 p. m. House of Delegates, Little Theatre, Municipal Auditorium.

#### ANNUAL BANQUET IN HONOR OF PAST PRESIDENTS

Ballroom, Hotel President, 7:30 p. m.

Robert Mueller, M.D., St. Louis, President, Presiding.

Address of Welcome, A. N. Altringer, M.D., Kansas City, President, Jackson County Medical Society.

Introduction of Guests.

Presentation of Past Presidents.



# SIMILAC



*Similar to  
breast milk*



One measure of powder + 2 ounces water = 2 ounces of  
normal formula — 20 calories per ounce

*measure included in each can*



**SIMILAC DIVISION**  
**M & R DIETETIC LABS. INC.**  
**COLUMBUS 16, OHIO**

6

Could you use an extra key case, Doctor — for that second set of car keys? We will be glad to send you one, of good solid leather, if you'll PRINT your name and address below.

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

\_\_\_\_\_

Presentation of Past Presidents' Key.  
 Presentation of 50 Year Pin.  
 Introduction of Winner of Woman's Auxiliary Essay Contest.  
 Address of the President.  
 Address of the President-Elect.  
 Installation of the President-Elect.  
 The Dangers of State Medicine, A. C. Ivy, M. D., Chicago.

**Tuesday, March 29, 1949, 9:30 a. m., Little Theatre, Municipal Auditorium**

9:30 a. m. Treatment of Diabetes Mellitus With Intermediate Insulin, Arthur R. Colwell, M.D., Evanston, Illinois.  
 10:00 a. m. The Management of Prostatism, John F. Patton, M.D., St. Louis.  
 A discussion of the present day management of prostatic obstruction, including early symptoms, diagnosis and corrective therapy.  
 10:20 a. m. Surgical Treatment of Advanced Cancer, Everett D. Sugarbaker, M.D., Jefferson City.

It is not the purpose of this presentation to outline any proposed methods of treatment for carcinomatosis of a palliative nature. The principles upon which cancer surgery is based will be discussed. Some of the policies of the recent past indicating the presumed hopelessness of certain forms of cancer will be reviewed. A number of different types of advanced cancer which have been treated successfully and in which the prognosis heretofore has been considered hopeless will be demonstrated in lantern slide material.

10:40 a. m. View of Exhibits. Arena, Municipal Auditorium.  
 11:10 a. m. Symposium on Gastric Pain.

**Medical Standpoint**

Epigastric Pain, A. C. Ivy, M.D., Chicago.

Many diseases may give rise to pain in the epigastrium. These may be classified as those intrinsic and those extrinsic to the stomach. The anatomic and physiologic mechanism of the pain for each important disease will be presented, such as gastric ulcer, gastric cancer, gastritis, gastric neurosis, hiatal hernia and the reflex dyspepsias. The importance of recognizing that mild dyspeptic symptoms may be due to gastric cancer will be emphasized. It is important that the physician teach the layman to have the cause of his dyspepsia or indigestion diagnosed accurately and early. Sometimes a delay of a few weeks is catastrophic.

**Surgical Standpoint**

J. Dewey Bisgard, M.D., Omaha

Gastric pain has three sources; organic, psychosomatic and dysfunctional. The two latter are classified as separate entities because they have widely different origins. The pain of psychosomatic origin is incited by the emotions whereas that of all other nonorganic disturbances, not attributed to the emotions, may be designated as dysfunctional. Often the dysfunction is caused by organic disease of contiguous or remote organs as, for example, acute appendicitis in which the gastric symptoms of epigastric pain, nausea and vomiting frequently initiate the attack.

The three principal organic lesions of the stomach which cause pain are peptic ulcer, carcinoma and diaphragmatic hernia. In all identical symptoms may occur. Unfortunately, it is not generally appreciated that despite every available means of diagnosis it is impossible in an astonishingly large percentage of cases to differentiate early carcinoma of the stomach from benign gastric ulcer. Various criteria will be offered to aid in the differential diagnosis of ulcer and carcinoma such as the age of the patient, the duration of symptoms in respect to the patient's age, the location of the lesion in the stomach and the size of the crater and gastric acidity.

The problem of carcinoma of the stomach is in general a challenge to diagnostic acumen for as this improves so will the number of long term cures increase.

12:15 p. m. Alumni of the University of Missouri School of Medicine Luncheon Meeting, Hotel President.

The Future of Our Medical Schools, T. H. Stubbs, M.D., Columbia, Missouri.

**Symposium on Trauma**

2:00 p. m. George A. Aiken, M.D., Marshall, Moderator.  
 Panel: J. Barrett Brown, M.D., St. Louis,



A. P. Rowlette, M.D., Moberly,  
Jacob Kulowski, M.D., St. Joseph,  
F. A. Carmichael, Jr., M.D., Kansas City.

3:15 p. m. View of Exhibits. Arena, Municipal Auditorium.

3:45 p. m. F. L. Kneibert, M.D., Poplar Bluff, Moderator.

Panel: David B. Robinson, M.D., Kansas City,  
Robert D. Duncan, M.D., Springfield,  
Fred A. Jostes, M.D., St. Louis,  
Edmund A. Smolik, M.D., St. Louis.

**Wednesday, March 30, 1949, 9:30 a. m., Little Theatre,  
Municipal Auditorium**

**Obstetric-Pediatric Symposium**

9:30 a. m. The Responsibility of the Physician in the Management of  
Premature Labor and Early Neonatal Care of the Infant,  
Frank R. Lock, M.D., Winston-Salem, North Carolina.

An analysis of three hundred consecutive premature labors at the North Carolina Baptist Hospital has been made. The record of all living babies between the weights of 475 grams (1 pound) and 2,500 grams (5 pounds, 8 ounces) has been reviewed. Every baby with a remote possibility of survival therefore was included. The records of three hundred and twenty-four living premature infants, with twenty-eight twin pregnancies and one triplet pregnancy, were studied.

The gross mortality in this series of premature deliveries was 20.6 per cent. Sixty infants were in poor condition at the time of delivery for various reasons, and fifty-seven of these babies died. The mortality rate for babies in poor condition at time of delivery was 95 per cent.

Two hundred and sixty-four of the babies were in good condition at the time of birth. Of these, only ten died, and two hundred and fifty-four babies lived. The mortality rate for the babies in good condition at delivery was 3.8 per cent.

This paper is a careful study of the factors in the management of labor and the early neonatal period which were judged to be of significance in the final results obtained. Some accountable factor for the good or bad record was found. The prenatal care, analgesia, anesthesia, method of delivery and early neonatal care were considered individually in the series. Specific factors are evaluated and recommendations for the management of premature labors are outlined.

10:00 a. m. Early Diagnosis of Diseases of the Newborn from the Obstetric Viewpoint, J. Milton Singleton, M.D., Kansas City.

10:20 a. m. Discussion: William See, M.D., Columbia.  
Don N. Morgan, M.D., Boonville.

10:30 a. m. View of Exhibits. Arena, Municipal Auditorium.

11:00 a. m. The Significance of Pathologic Changes in the Liver in Infantile Diarrhea, Peter G. Danis, M.D., St. Louis.

11:20 a. m. Discussion: Urban J. Busiek, M.D., Springfield,  
Vincente Moragues, M.D., St. Louis.

11:30 a. m. Hypoglycemic States in the Newborn, H. Ewing Wachter, M.D., St. Louis.

11:50 a. m. Discussion: Hugh L. Dwyer, M.D., Kansas City.

**SCIENTIFIC EXHIBITS**

**Arena, Municipal Auditorium**

Indication for Colostomy in Cancer of the Rectum and Colon, Frederick B. Campbell, M.D., and William C. Schaerrer, M.D., Kansas City.

Tumors of the Genitalia, Hjalmar E. Carlson, M.D.; C. Laurence Johnson, M.D., and Jack H. Hill, M.D., Kansas City.

Congenital Deformities Repaired by Plastic Surgery, James Barrett Brown, M.D., St. Louis.

Pancreatic Disease: Clinical and Laboratory Features, W. J. Knight, M.D.; Ann Sommers, and R. O. Muether, M.D., St. Louis.

Diabetes in Infants and Children, Robert Henry, M.D.; Harry M. Gilkey, M.D., and Stanford F. Cockerell, M.D., Kansas City.

The Treatment of Essential Hypertension and Paroxysmal Tachycardia, Lee Pettit Gay, M.D., St. Louis.

## CHECK LIST

*for choice of  
a laxative*

### Phospho- Soda (FLEET) TYPE OF ACTION

- ✓ Prompt action
- ✓ Thorough action
- ✓ Gentle action

### SIDE EFFECTS

- ✓ Free from Mucosal Irritation
- ✓ Absence of Constipation Rebound
- ✓ No Development of Tolerance
- ✓ Safe from Excessive Dehydration
- ✓ No Disturbance of Absorption of Nutritive Elements
- ✓ Causes no Pelvic Congestion
- ✓ No Potent Discomfort
- ✓ Nonhabituating
- ✓ Free from Cumulative Effects

### ADMINIS- TRATION

- ✓ Flexible Dosage
- ✓ Uniform Potency
- ✓ Pleasant Taste

Phospho-Soda (Fleet) is a solution containing in each 100 cc. sodium biphosphate 48 Gm. and sodium phosphate 18 Gm.



## Judicious Laxation

...through freedom from  
undesirable side effects

The clinical preference for Phospho-Soda (Fleet)\* stems in large part from its freedom from undesirable side effects. This desideratum, together with its controlled action and ease of administration, assure safe, effective anticonstipative therapy from every prescription of this "tried and true" laxative agent. Clinical samples on request.

**C. B. FLEET CO., INC. • LYNCHBURG, VIRGINIA**

\*'PHOSPHO-SODA' and 'FLEET' are registered trade-marks of C. B. Fleet Co., Inc.



**PHOSPHO-SODA**  
(FLEET)

®



- Proposed Classification of Blood Cells; Kodachrome Illustration, G. O. Broun, M.D., and Sister Leo Rita, St. Louis.  
Further Studies in Vascular Diseases, F. Stanley Morest, M.D., Kansas City.  
The American National Red Cross.  
Kansas City Social Hygiene Society.  
Liver Biopsy, Vincente Moragues, M.D.; W. A. Knight, M.D., and R. O. Muether, M.D., St. Louis.  
The Technic of Rhinoplasty, James F. Dowd, M.D., St. Louis.  
Cancer in Children, Harry M. Gilkey, M.D.; William Crouch, M.D.; Forest Cornwall, M.D.; Thomas L. Draney, M.D., and David Howard, M.D., Kansas City.  
Some Unusual Facial Reconstructions, David W. Robinson, M.D., Kansas City.  
Missouri State Society of Pathologists.

## TECHNICAL EXHIBITS

### Municipal Auditorium—Kansas City

#### W. B. SAUNDERS COMPANY, PHILADELPHIA. BOOTH 2.

We invite all doctors attending the meeting of the Missouri State Medical Association to visit our exhibit where our representative, Mr. Seth Melnich, will be in charge. We are displaying a complete line of our books including Hyman's "Integrated Practice of Medicine," Bockus' "Gastro-Enterology," Conn's "Current Therapy," Meleney's "Treatment of Surgical Infections," Snyder's "Obstetric Analgesia," Crile's "Thyroid Disease," DeGowin, Hardin and Alsever's "Blood Transfusion," Dowling's "Acute Bacterial Diseases," and many others.

#### LOV-E BRASSIERE COMPANY, HOLLYWOOD, CALIF. BOOTH 3.

We invited you to inspect our highly specialized line of therapeutic breast supports. These scientific brassieres enable the physician to prescribe remedial supports for specific breast conditions. Each Lov-E' brassiere is custom-fitted inch-by-inch to your patient's personal measurements . . . and in exact accordance with your instructions. Lov-E' Corrective Brassieres are available in the Lov-E' Section, Corset Department, Famous-Barr Company, St. Louis, eighteen models in more than 500 bust-cup-torso size variations. Special brassieres for prenatal, postpartum, atrophic, hypertrophic and mastectomy; also sleeping brassieres, hospital binders, artificial breasts, anatomically designed muscle pads and maternity garter supports.

#### VANPELT & BROWN, INC., RICHMOND, VA. BOOTH 4.

VanPelt and Brown cordially invites the members of the Missouri State Medical Association to visit their booth, where clinical samples and descriptive literature of V&B prescription specialties are available. V&B announces the addition of Theobarb with Mannitol Hexanitate to the Theobarb family, for the symptomatic treatment of hypertension.

#### PARKE DAVIS & COMPANY, DETROIT. BOOTH 5.

Members of the Parke, Davis & Company Medical Service Staff are on hand at our Exhibit for consultation and general discussion of the products classified in our Pharmaceutical, Antibiotic, and Biologic Lines. Important specialties, such as Penicillin S-R, Benadryl, Vitamin Products, Hypnotics, Antibiotics, Etamon, Oxyel, Thrombin Topical, Influenza Virus Vaccine, and other Biologics are featured. You are cordially invited to visit our booth with the assurance that your interest will indeed be much appreciated.

#### LUZIER'S INC., KANSAS CITY. BOOTH 7.

A complete display of Luzier's Fine Cosmetics and Perfumes are exhibited in Booth 7. This will be of interest to dermatologists and allergists as well as to the ladies who visit the convention. Officials of Luzier's, Inc., are on hand to explain Luzier's Service in the field of allergy.

#### MEAD JOHNSON & COMPANY, EVANSVILLE, IND. BOOTH 8.

Amigen and Protolysate is on display at the Mead Johnson Exhibit. Mead Johnson has pioneered the amino acid field commercially; the products have been described in more than four hundred articles in the medical literature. Trained representatives are at the Mead Exhibit to discuss details of the new amino acid products. Shown also are Dextri-Maltose, Pablum, Pabena, Oleum Percomorphum and the other Mead products used in infant nutrition. Protenum, a new high-protein product is displayed; also Lonalac for low-sodium diets.

#### ORTHO PHARMACEUTICAL CORPORATION, RARITAN, N. J. BOOTH 9.

Ortho cordially invites you to Booth 9 where the full line of Ortho specialties are exhibited. Featured are Ortho Gynol, Ortho Creme and other Ortho products used in the control of conception. Newer gynecologic pharmaceuticals will also be on display.

#### TESTAGAR & Co., INC., DETROIT. BOOTH 10.

#### AIR PURIFICATION SERVICE WESTERN, INC., ST. LOUIS. BOOTH 11.

Air Purification Service Western, Inc., are distributors of the glycol vaporizers manufactured by Air Purification Service, Inc., Newark, N. J. The parent company was formed by the five engineers who, while with Research Corporation and in collaboration with Dr. Robertson, dean of the Chicago University School of Medicine, first discovered the germ killing effect of glycol vapors.

#### COCA-COLA COMPANY, ATLANTA. BOOTHS 12 AND 13.

Ice-cold Coca-Cola served through the courtesy of the Kansas City Coca-Cola Bottling Co. and The Coca-Cola Company.

**ABBEY RENTS, KANSAS CITY. BOOTH 14.**

A unique rental and sales service displaying the most modern and efficient hospital supplies and equipment. This nation-wide service is designed specifically for you, your hospital and your patient.

**MASSACHUSETTS INDEMNITY INSURANCE COMPANY, BOSTON. BOOTH 15.**

No one is hit harder by disability than the physician—no one has less time to solve his own problem of insuring it. The solution to your individual problem is a matter for competent advice. We are equipped by long years study of the physicians' disability problem to do just that for you. C. E. Hovey, the head of the Agency, and J. R. (Mac) McKnight, formerly Area Supervisor of Blue Cross, are here to serve you and explain our noncancellable, Guaranteed Renewable Disability policies.

**UNITED MEDICAL EQUIPMENT CO., KANSAS CITY. BOOTH 16.**

The United Medical Equipment Company is demonstrating the latest Direct Recording Cardiotron. Actual Electrocardiograms will be run on Permanent Scratch Proof Cardiotron Paper. The compact Profexray Table Model X-ray also is displayed. The newest model, FCC approved, Birtcher line of Diathermy, is featured. Do not fail to see this most interesting exhibit.

**WM. P. POYTHRESS & CO., RICHMOND, VA. BOOTH 17.**

A cordial welcome awaits you at the Poythress exhibit booth, which is featuring Solfoton, Antrocol, TCS, Uro-Phosphate, Panalgesic, Merpectogel, and other Poythress specialties. Mr. Walter H. Kaemph, Jr., western Missouri representative for Poythress, and Mr. Robert Fryer, eastern Missouri representative for Poythress, are in charge.

**MEDICAL PROTECTIVE COMPANY, FORT WAYNE. BOOTH 18.**

The Medical Protective Company's representative, thoroughly trained in professional liability underwriting, invites you to visit the exhibit Booth 18. He is entirely familiar with the principles of the reciprocal rights and duties of a doctor and patient and with the circumstances peculiar to that relationship. He will be glad to explain how his company meets these exacting requirements of adequate liability protection, which are peculiar to the professional liability field.

**CAMERON SURGICAL SPECIALTY COMPANY, CHICAGO. BOOTH 19.**

See the new Cauterodynes, the Cauteradio and accessories for all phases of Electro-Surgery, Electro-Cauterization, Electro-Coagulation, Desiccation and Fulguration; Electro-Diagnostic Lamp and Instrument Outfits; the new stainless steel Peroral Endoscopic sets; Mirrolite and other Headlites; Binocular Loupes; Illuminated Specula, Endoscopes, Retractors and other instruments for all types of diagnosis, treatment and surgery.

**JONES METABOLISM EQUIPMENT CO., ST. LOUIS. BOOTH 20.**

In our display this year we feature our New Super Motor Basal. This really is two machines in one unit. Its construction is such that by four different combinations of time and bellows capacity all extraordinary and extreme cases may be handled with the same assured accuracy as your general run of patients on the standard model. Expert technicians, with years of training in metabolism work, are in attendance to explain in detail any question you may have in this particular field.

**DUMAS-WILSON & COMPANY, ST. LOUIS. BOOTH 21.**

"The House of Nutrition." A complete line of dietary formulae. See us for your special formula work—tablets and capsulating.

**H. G. FISCHER & CO., FRANKLIN PARK, ILL. BOOTH 23.**

At Booth 23 see H. G. Fischer & Co.'s efficient, modern, yet low-priced X-ray and physical therapy equipment. Allow our representatives to make interesting demonstrations with no obligation to you. See the latest method of short wave diathermy application with the patented adjustable induction electrode. Your visit welcomed and appreciated.

**BURROUGHS WELLCOME & CO., NEW YORK. BOOTH 24.**

Among significant products featured are "Wellcome" brand Globin Insulin with Zinc "B. W. & Co.," which provides an action which is timed to be more suitable for the average diabetic; "Dexin" brand High Dextrin Carbohydrate, in which the nonfermentable proportion predominates; "Digoxin," the pure, stable, crystalline glycoside which offers predictable digitalization; and "Methedrine," a recent sympathomimetic drug of wide therapeutic application.

**J. R. SIEBRANDT MANUFACTURING CO., KANSAS CITY. BOOTH 25.**

The Siebrandt Mfg. Co. will display a number of new instruments including the new improved Jackson Bone Clamp for reduction and alignment of fractures, especially of femurs. The outstanding feature of the exhibit will be a Plate Holding Clamp which presents an entirely new approach in the technic of applying bone plates. Displayed are a new Drill Guide which assures accurately centered holes, a Removable Plaster Hitch set, Goodwin Bone Clamps, Finger Trap Attachment, a new Cycleciser, which is a low priced exerciser for patients requiring passive motion of limbs or hips, and a complete line of bone instruments and fracture equipment.

**LANTEEN MEDICAL LABORATORIES, CHICAGO. BOOTH 30.**

Lanteen Medical Laboratories, Inc., cordially invites you to visit their Booth 30. Representatives will discuss an improved diaphragm fitting technic used in conjunction with the Lanteen Flat Spring Diaphragm. Other well known Lanteen products also are featured in the exhibit.

**SHARP & DOHME, PHILADELPHIA. BOOTH 31.**

Visitors attending the Missouri State Medical Association meeting are cordially invited to visit the Sharp & Dohme exhibit in Booth 31. Stable, portable "Lyovac"





**DRINK**  
*Coca-Cola*  
TRADE MARK REG.

You trust  
its quality

# MILWAUKEE SANITARIUM

WAUWATOSA, WISCONSIN

## FOR NERVOUS DISORDERS

(Chicago Office—1117 Marshall Field Annex  
Wednesday, 1-3 P. M.)

Maintaining the highest standards for more than a half century, the Milwaukee Sanitarium stands for all that is best in the care and treatment of nervous disorders. Photographs and particulars on request.

JOSEF A. KINDWALL, M.D.  
CARROLL W. OSCOOD, M.D.  
WILLIAM T. KRADWELL, M.D.  
BENJAMIN A. RUSKIN, M.D.  
LEWIS DANZIGER, M.D.  
RUSSELL C. MORRISON, M.D.  
G. CHARLES SUTCH, M.D.  
RAYMOND HEADLEE, M.D.  
ARTHUR J. PATEK, M.D., Consultant  
G. H. SCHROEDER, Business Manager

COLONIAL HALL—One of the 14 Units in "Cottage Plan."



Normal Human Plasma irradiated to destroy not only bacteria but also the viral contaminants that might cause homologous serum hepatitis merits your attention. Unusual specialties including the popular sulfonamide and antibiotic drugs also are of major interest. Courteous attendants will be pleased to serve you.

**LEDERLE LABORATORIES, NEW YORK. BOOTH 32.**

You are cordially invited to visit our exhibit in Booth 32, where you will find representatives who are prepared to give you the latest information on Lederle products.

**DAIRY COUNCIL OF GREATER KANSAS CITY, KANSAS CITY. BOOTH 37.**

**C. B. FLEET COMPANY, LYNCHBURG, VA. BOOTH 38.**

C. B. Fleet Co., Inc., cordially invites you to stop by Booth 38 for a short visit with Mr. Paul Holzapfel, the representative who sees you in your office about once a year. Perhaps there is something about Phospho-Soda (Fleet), the pure, stable, aqueous concentrate of the two U.S.P. Sodium Phosphates, you would like to discuss with him.

**PHILIP MORRIS & CO., NEW YORK. BOOTH 39.**

Philip Morris & Company will demonstrate the method by which it was found that Philip Morris Cigarettes, in which diethylene glycol is used as the hygroscopic agent, are less irritating than other cigarettes. Their representatives will be happy to discuss researches on this subject and problems on the physiologic effects of smoking.

**DOHO CHEMICAL CORPORATION, NEW YORK. BOOTH 40.**

The makers of Auralgan are featuring at this meeting their new sulfa preparation, O-Tos-Mo-San, indicated in the treatment and control of chronic suppurative ears. Also, Mallon, division of Doho is introducing our new topical anesthesia, Rectalgan, for relief of pain and itching in hemorrhoids and pruritus. This new therapy enjoys many advantages over the outmoded suppositories and ointments. Our representatives will be happy to explain in detail the workings of these medications.

**SANDOZ CHEMICAL WORKS, INC., NEW YORK. BOOTH 43.**

Among recently released Sandoz Medicinal Specialties are Methergine (Methyl Ergonovine) a partial synthetic oxytocic; Mesantoin (Methyl-phenyl-ethyl Hydantoin) and Hydantal (Mesantoin plus phenobarbital) anti-convulsants for the control or reduction in the frequency of epileptic seizures; Dihydroergotamine 'Sandoz' (D.H.E.-45), the improved non-narcotic relief for migraine-Dihydroergotamine lessens incidence of nausea and vomiting, uterotonic effect of ergotamine is practically eliminated, sympathico-inhibitory effect is enhanced. Other well known Sandoz products include Belladenal, Bellergal, Bellafoline, Cedilanid, Digilanid, Neo-Calglucon Syrup and ampul solution.

**CIBA PHARMACEUTICAL PRODUCTS, SUMMIT, N. J. BOOTH 46.**

Ciba Pharmaceutical Products, Inc., Summit, New Jersey, invites you to visit their exhibit for latest information on Priscol, a valuable adjunct to the treatment of peripheral vascular disease. Pyribenzamine, HCl, the antihistaminic drug for prevention and relief of anaphylaxis and many forms of allergy, also is featured. Representatives in attendance will gladly answer any questions about these and other Ciba products.

**E. R. SQUIBB & SONS, NEW YORK. BOOTH 47.**

E. R. Squibb & Sons are featuring Dihydrostreptomycin and the new Penicillin Dispulator.

**AUDIPHONE COMPANY OF KANSAS CITY, INC., KANSAS CITY. BOOTH 48.**

Authorized Distributors of the Famous ADC Audiometers—the Audiometer with two live receivers for greater accuracy, speed and convenience. Now being used by leading Otologists, research men and institutions throughout the United States. Professional and Portable Models available promptly. Milingering Tests built in expressly for Veterans Administration. For quicker, better testing—buy an ADC. All models are on display.

**HOLLAND RANTOS COMPANY, NEW YORK. BOOTH 51.**

You will want to see the anatomically correct Pelvi-Form Clinical Teaching Model—an aid to visual demonstration of scientific contraceptive technic, for explaining gynecologic conditions generally, and for establishing surgical approach. Improved package design for Koromex contraceptive specialties will interest you. Samples are available upon request not only of "Council Accepted" Koromex Jelly and Cream, but also of Nylmerate Jelly, a specific trichomonacide that is effective, inexpensive and convenient for patients to use at home.

**CARNATION COMPANY, LOS ANGELES, CALIF. BOOTH 54.**

You are invited to visit Booth 54 where you will see an attractive display on Carnation Evaporated Milk—"the milk every doctor knows." Some valuable information on the use of this milk for infant feeding, child feeding and general diet will be presented and the method by which Carnation is generously fortified with pure crystalline Vitamin D—400 U. S. P. units per reconstituted quart—will be explained. Interesting literature also is available for distribution.

**U. S. VITAMIN CORPORATION, NEW YORK. BOOTH 55.**

Full color illustrated brochure "Diagnosing Vitamin Deficiencies" together with professional samples and literature on Vi-Syneral, Vi-Syneral Vitamin Drops, Poly-B, Vi-Litron, Hypervitam, Lipoheplex, Rutin-Rutascorb, Methischol, Tri-Sulfanyl, Vi-Syneral Injectable and others.

**PRODUCERS CREAMERY COMPANY, SPRINGFIELD, MO. BOOTH 56.**

Our representative, Mr. G. J. Swearingen, is stationed at Booth 56. He will gladly explain to you in detail the distinctive characteristics of Daricraft



Homogenized Evaporated Milk. At our booth also is free literature which we feel sure will be of interest to you and your patients. Feel free to ask questions about our product and service to doctors.

**ABBOTT LABORATORIES, NORTH CHICAGO. BOOTH 62.**

Abbott Laboratories are featuring the Aerohaler, a new device for administering powdered penicillin to the upper respiratory tract and lungs. Enlarged models show the discharge chamber, the detachable mouthpiece and nosepiece, and the Abbott sifter cartridge, which in the clinical size contains 100,000 units of finely powdered crystalline penicillin G sodium.

**ELI LILLY & COMPANY, INDIANAPOLIS. BOOTH 63.**

The Lilly medical service representative cordially invites you to visit the Lilly exhibit located in Booth 63. Many new therapeutic developments are featured and literature on these products is available. Lilly medical service representatives are in attendance to aid visiting physicians in every way possible.

**WINTHROP-STEARN'S INC., NEW YORK. BOOTH 68.**

Winthrop-Stearns, Inc., New York, extends a cordial invitation to visit its Booth 68 where representatives are on hand to discuss the latest therapeutic contributions made by this firm. Featured are Isuprel, new, more efficient and convenient bronchodilator, tablets for sublingual use, solution for inhalation; Neocurtasal, sodium-free seasoning agent; Neo-Synephrine, well tolerated prolonged decongestive; Demerol, powerful analgesic, spasmolytic and sedative, especially well suited for preoperative and postoperative use.

**PET MILK SALES CORPORATION, ST. LOUIS. BOOTH 69.**

Specially trained representatives are in attendance to discuss the use of Pet Milk in infant feeding, and to present many services that are time savers for busy physicians. Minature Pet Milk cans will be given to visitors at the exhibit.

**CAMEL CIGARETTES, NEW YORK. BOOTH 70.**

Camel Cigarettes are featuring color slides of background data from their newest research. After weekly examinations of the throats of hundreds of men and women smoking Camel Cigarettes exclusive for thirty days, throat specialists reported "Not one single case of throat irritation due to smoking Camels."

**M & R DIETETIC LABORATORIES, INC., COLUMBUS. BOOTH 71.**

**CAMERON HEARTOMETER COMPANY, CHICAGO. BOOTH 73.**

See the improved Heartometer, a scientific precision instrument for accurately recording systolic and diastolic blood pressures, also furnishing a permanent graphic record of the pulse rate, disturbances of the rhythm, myocardial response, the action of the valves, as well as peripheral vascular circulation. The Heartometer clearly reveals heart disturbances in both early and advanced stages and is of great value in checking the progress of treatments.

**G. D. SEARLE & COMPANY, CHICAGO. BOOTH 74.**

You are cordially invited to visit the Searle booth where our representatives will be happy to answer any questions regarding Searle Products of Research. Featured are Ruphyllin, for abnormal capillary fragility, Hydryllin, new and effective antihistaminic, as well as such time proven products as Searle Aminophyllin in all dosage forms, Metamucil, Ketochol, Floraquin, Kiophyllin, Diodoquin, Pavatrine and Pavatrine with Phenobarbital.

**GREB X-RAY COMPANY, KANSAS CITY. BOOTH 75.**

As distributors of Picker X-ray apparatus, Liebel Flarsheim shortwave and Bovie electrosurgical units, Hanovia quartz lamps, and Beck-Lee electrocardiographs, the representatives of the Greb X-Ray Company will be on duty and cordially extend an invitation for you to visit with them and place their complete service at your disposal.

**GOETZE NIEMER COMPANY, ST. JOSEPH. BOOTH 76.**

**GUILDCRAFTERS, HOLLYWOOD, CALIF. BOOTH 77.**

**BURT KRONE COMPANY, SPRINGFIELD, MO. BOOTH 83.**

Displayed is a cross-section of Krone's Physicians and Hospital Equipment with many new and improved units. Featured is the new Council Accepted, FCC Approved Birtcher Bandmaster, Crystal Controller Diatherm; new "double power" Hyfrecator; the sensational new Blendtome, Portable Electro-Surgery; Master Stainless Surgical Instruments; the new hospital model Kast Kutter; the new Lem-Blay Circumcision Clamp. Several "Convention Specials" from regular and War Surplus stocks which will represent money-saving values. There also is a useful convention souvenir for every visitor at Booth 83. Do not miss this display.

**A. S. ALOE COMPANY, ST. LOUIS. BOOTH 84.**

County	Delegate	Alternate
Andrew.....		
Audrain.....	W. K. McCall, Laddonia.....	Thomas L. Dwyer, Mexico
Barton-Dade....	Claude E. Duckett, Lamar.....	Vern T. Bickel, Lamar
Barton-Dade....	Alvin R. Cain, Greenfield.....	Watt O. Cowan, Greenfield
Bates.....		
Benton.....	David H. Glenn, Warsaw.....	T. S. Reser, Cole Camp
Boone.....		
Buchanan.....		
Buchanan.....		
Butler.....		

<i>County</i>	<i>Delegate</i>	<i>Alternate</i>
Caldwell-		
Livingston....	Joseph Conrad, Chillicothe.....	Chas. M. Grace, Chillicothe
Caldwell-		
Livingston....	C. H. Wilbur, Polo.....	
Callaway.....		
Camden.....	E. G. Claiborne, Camdenton....	G. T. Myers, Macks Creek
Cape Girardeau	R. A. Ritter, Cape Girardeau....	A. M. Estes, Jackson
Carroll.....	W. G. Atwood, Carrollton.....	Eugene L. Bales, Carrollton
Carter-Shannon	T. W. Cotton, Van Buren.....	
Carter-Shannon		
Cass.....	David S. Long, Harrisonville....	
Chariton-Macon-		
Monroe-		
Randolph....	G. W. Hawkins, Salisbury.....	F. L. Harms, Salisbury
Chariton-Macon-		
Monroe-		
Randolph....	D. E. Eggleston, Macon.....	Howard Miller, Macon
Chariton-Macon-		
Monroe-		
Randolph....	G. M. Ragsdale, Paris.....	F. A. Barnett, Paris
Chariton-Macon-		
Monroe-		
Randolph....	T. S. Fleming, Moberly.....	A. P. Rowlette, Moberly
Clay.....	A. E. Spelman, Smithville.....	W. H. Goodson, Liberty
Clinton.....		
Cole.....	Marshall W. Kelly,	Everett D. Sugarbaker,
	Jefferson City.....	Jefferson City
Cooper.....	Byron M. Stuart, Boonville.....	
Dallas-Hickory-		
Polk.....	Grover C. Plummer, Buffalo...	L. A. Glasco, Urbana
Dallas-Hickory-		
Polk.....	George G. Robinson, Humans-	
	ville	
Dallas-Hickory-		
Polk.....		
DeKalb.....		
Dunklin.....	Paul Baldwin, Kennett.....	W. D. English, Cardwell
Franklin.....	Herbert H. Schmidt, Marthasville	
Greene.....	F. T. H'Doubler, Springfield....	Ronald F. Elkins,
		Springfield
Greene.....	A. Denton Vail, Springfield....	Harry D. Silsby,
		Springfield
Greene.....	Durward G. Hall, Springfield...	John W. Williams,
		Springfield
Grundy-Daviess	E. A. Duffy, Trenton.....	E. J. Mairs, Trenton
Grundy-Daviess	Fred Wilson, Winston.....	Edward Nixon, Gallatin
Harrison.....		
Henry.....	R. S. Hollingsworth, Clinton....	G. S. Walker, Clinton
Holt.....		
Howard.....	W. J. Shaw, Fayette.....	F. D. Dean, Fayette
Jackson.....	Arthur N. Altringer,	
	Kansas City.....	Alvin J. Baer, Kansas City
Jackson.....	Victor Buhler, Kansas City....	W. P. Bunting, Kansas City
Jackson.....	Donald F. Coburn, Kansas City..	Wm. W. Gist, Kansas City
Jackson.....	Kenneth E. Cox, Kansas City...	F. Stanley Morest,
		Kansas City
Jackson.....	Ralph E. Duncan, Kansas City..	F. Garrett Pipkin,
		Kansas City
Jackson.....	Hugh L. Dwyer, Kansas City...	Harold M. Roberts,
		Kansas City
Jackson.....	R. Lee Hoffmann, Kansas City..	Everett A. Wilkinson,
		Kansas City
Jackson.....	John S. Knight, Kansas City	
Jackson.....	Herbert L. Mantz, Kansas City	
Jackson.....	Richard L. Sutton, Kansas City	
Jackson.....	George H. Thiele, Kansas City	
Jackson.....	Vincent T. Williams, Kansas City	
Jackson.....	Orval R. Withers, Kansas City	
Jackson.....	A. Melvin Ziegler, Kansas City	
Jasper.....	B. E. DeTar, Joplin.....	G. A. Schulte, Joplin
Jasper.....	S. W. Scorse, Joplin	
Jefferson.....		
Johnson.....	T. Reed Maxson, Warrensburg..	R. Lee Cooper,
		Warrensburg
Laclede.....	P. A. Jenkins, Lebanon.....	R. E. Harrell, Lebanon



FULL POTENTIALITIES OF THEOPHYLLINE THERAPY REALIZED...

# SYNOPHYLATE

TRADE MARK

COUNCIL



ACCEPTED

BRAND OF

THEOPHYLLINE-SODIUM GLYCINATE

**DOSAGE BARRIER REMOVED:** Theophylline dosage can now be pushed to levels which provide the optimal benefits of the medication. SYNOPHYLATE\* is well tolerated: irritative effect on the gastric mucosa is minimized. Its high degree of solubility permits prompt absorption with rapid clinical effect.

**FLEXIBILITY OF DOSAGE:** Three dosage forms of SYNOPHYLATE facilitate adaptation of the medication to the needs of the individual.

**Tablets SYNOPHYLATE:** 0.33 Gm. (5 grains), equivalent to 0.165 Gm. (2½ grains) Theophylline U.S.P.; bottles of 100, 500, and 1,000. Tablets of 0.165 Gm. (2½ grains) also available.

**Syrup SYNOPHYLATE:** Each teaspoonful (4 cc.) contains 0.33 Gm. (5 grains) SYNOPHYLATE, equivalent to 0.165 Gm. (2½ grains) Theophylline U.S.P.; bottles of 1 pt. and 1 gal.

**Suppositories SYNOPHYLATE, Rectal:** Each suppository contains 0.78 Gm. (12 grains) SYNOPHYLATE, equivalent to 0.39 Gm. (6 grains) Theophylline U.S.P.; cartons of 12 foil-wrapped suppositories.

\*Trademark of The Central Pharmacal Co.

**THE CENTRAL PHARMACAL COMPANY**

*Pharmaceutical Progress Since 1904*

SEYMOUR...



...INDIANA

<i>County</i>	<i>Delegate</i>	<i>Alternate</i>
Lafayette.....	W. E. Koppenbrink, Higginsville.....	Hugh Brady, Concordia
Lewis Clark- Scotland.....	P. W. Jennings, Canton.....	Landis Davis, Canton
Lewis-Clark- Scotland.....		
Lewis-Clark- Scotland.....		
Lincoln.....	E. O. Dameron, Elsberry.....	J. C. Creech, Troy
Linn.....	John R. Dixon, Brookfield.....	Roy Haley, Brookfield
Marion-Ralls....	B. L. Murphy, Hannibal.....	J. W. Hardesty, Hannibal
Marion-Ralls....		
Mercer.....	George B. Bristow, Princeton...	D. P. Pickett, Princeton
Miller.....	W. L. Allee, Eldon.....	
Mississippi.....	C. C. Presnell, Charleston.....	G. W. Whitaker, East Prairie
Moniteau.....	E. A. Kibbe, California.....	H. C. Hume, Tipton
Montgomery....		
Morgan.....	J. L. Washburn, Versailles.....	A. J. Gunn, Versailles
New Medrid....		
Newton.....	F. F. Whitehead, Neosho.....	Harold C. Lentz, Neosho
Nodaway-Atchi- son-Gentry- Worth.....	Henry C. Bauman, Maryville	
Nodaway-Atchi- son-Gentry- Worth.....	George R. Wempe, Tarkio	
Nodaway-Atchi- son-Gentry- Worth.....	Frank H. Rose, Albany	
Nodaway-Atchi- son-Gentry- Worth.....	Frank B. Matteson, Grant City	
North Central—		
Adair.....	J. S. Gashwiler, Novinger.....	M. T. English, Kirksville
Schuyler.....	I. M. Nulton, Lancaster .....	H. E. Gerwig, Downing
Knox.....	F. E. Lumen, Edina	
Sullivan.....	J. S. Montgomery, Milan.....	W. Herington, Green City
Putnam.....	P. V. Hart, Coatesville.....	E. A. Montgomery, Unionville
Ozarks—		
Barry.....	Robert R. Donley, Monett.....	F. T. Kerr, Monett
Lawrence.....	Kenneth Glover, Mt. Vernon...	A. J. C. McCallum, Aurora
Stone.....	H. L. Kerr, Crane.....	Fred L. Wommack, Crane
Christian.....	Charles A. Spears, Billings.....	Stanley Roper, Ozark
Taney.....	J. M. Threadgill, Forsyth.....	Harry T. Evans, Branson
Pemiscot.....		
Perry.....	O. A. Carron, Perryville.....	L. W. Feltz, Perryville
Pettis.....	P. V. Siegel, Smithton.....	G. C. Stauffacher, Sedalia
Phelps-Craw- ford-Dent- Pulaski.....		
Phelps-Craw- ford-Dent- Pulaski.....		
Phelps-Craw- ford-Dent- Pulaski.....		
Phelps-Craw- ford-Dent- Pulaski.....		
Pike.....	Charles H. Lewellen, Louisiana .....	W. B. Wilcoxin, Bowling Green
Platte.....		
Ray.....		
St. Charles.....		
St. Francois- Iron-Madison- Washington- Reynolds.....	Harry M. Roebber, Bonne Terre.	C. H. Applebury, Flat River
St. Francois- Iron-Madison- Washington- Reynolds.....	Ben Bull, Ironton.....	R. E. Harland, Ironton



<i>County</i>	<i>Delegate</i>	<i>Alternate</i>
St. Francois- Iron-Madison- Washington- Reynolds.....	Harry Barron, Fredericktown...	Marvin Grossman, Fredericktown
St. Francois- Iron-Madison- Washington- Reynolds.....	E. S. Wallace, Potosi.....	J. L. Thurman, Potosi
St. Francois- Iron-Madison- Washington- Reynolds.....	A. F. Bugg, Ellington.....	J. R. Pyrtle, Centerville
Ste. Genevieve.	R. C. Lanning, Ste. Genevieve	
St. Louis.....	Eugene R. Brown, University City.....	John Briscoe, Maplewood
St. Louis.....	Robert B. Denny, University City.....	Joseph Costrino, St. Louis
St. Louis.....	John O'Connell, Overland.....	M. A. Diehr, St. Louis
St. Louis.....	Roy Walther, Sr., Overland.....	F. W. Luedde, St. Louis
St. Louis.....	Paul Whitener, St. Louis.....	Henry Rosenberg, St. Louis
St. Louis City..	Oliver Abel, Jr., St. Louis.....	Maxwell Fineberg, St. Louis
St. Louis City..	Emil A. Burst, St. Louis.....	A. N. Arneson, St. Louis
St. Louis City..	E. Lee Dorsett, St. Louis.....	Wendell G. Scott, St. Louis
St. Louis City..	Harry R. Echterhoff, St. Louis..	Lewis M. Webb, St. Louis
St. Louis City..	Edwin C. Ernst, St. Louis.....	Frank McDowell, St. Louis
St. Louis City..	Armand D. Fries, St. Louis.....	C. Malone Stroud, St. Louis
St. Louis City..	S. Albert Hanser, St. Louis.....	Robert E. Britt, St. Louis
St. Louis City..	Andrew C. Henske, St. Louis...	Wm. H. Norton, St. Louis
St. Louis City..	R. Emmet Kane, St. Louis.....	Raoul L. Ramos, St. Louis
St. Louis City..	Louis H. Kohler, St. Louis.....	Charles L. Klenk, St. Louis
St. Louis City..	Wm. B. Kountz, St. Louis.....	Joseph Grindon, Jr., St. Louis
St. Louis City..	Curtis H. Lohr, St. Louis.....	Bernard L. Sinner, St. Louis
St. Louis City..	Robert C. McElvain, St. Louis..	Adolph H. Conrad, Jr., St. Louis
St. Louis City..	Charles E. Martin, St. Louis....	Bernhardt W. Klipfel, St. Louis
St. Louis City..	Mary E. Morris, St. Louis.....	Joan M. Goebel, St. Louis
St. Louis City..	James A. O'Dowd, St. Louis...	Walter E. Hennerich, St. Louis
St. Louis City..	F. G. Pernoud, St. Louis.....	Andrew J. Signorelli, St. Louis
St. Louis City..	Jacob G. Probststein, St. Louis...	John F. Patton, St. Louis
St. Louis City..	Alphonse J. Raemdonck, St. Louis.....	Leo J. Hartnett, St. Louis
St. Louis City..	Llewellyn Sale, St. Louis.....	Arthur W. Neilson, St. Louis
St. Louis City..	Victor E. Scherman, St. Louis...	Leo V. Mulligan, St. Louis
St. Louis City..	Robert E. Schlueter, St. Louis..	Paul F. Fletcher, St. Louis
St. Louis City..	Cyril W. Schumacher, St. Louis..	Otto J. Wilhelmi, St. Louis
St. Louis City..	Jerome I. Simon, St. Louis.....	Charles R. Doyle, St. Louis
St. Louis City..	J. Wm. Thompson, St. Louis....	Louis N. Berard, St. Louis
St. Louis City..	Carl F. Vohs, St. Louis.....	George A. Carroll, St. Louis
St. Louis City..	Joseph E. Von Kaenel, St. Louis..	George J. L. Wulff, Jr., St. Louis
St. Louis City..	Oliver B. Zeinert, St. Louis....	Paul C. Schnoebelen, St. Louis
Saline.....	R. C. Haynes, Marshall.....	C. A. McBurney, Slater
Scott.....	W. O. Finney, Chaffee.....	A. D. Martin, Sikeston
Shelby.....	P. C. Archer, Shelbyville	
South Central—		
Howell.....	C. F. Callihan, West Plains.....	R. H. Smith, West Plains
Oregon.....	C. W. Cooper, Thayer.....	F. A. Barnes, Thayer
Texas.....	Garrett Hogg, Jr., Cabool.....	T. J. Burns, Houston
Wright.....	R. A. Ryan, Mountain Grove...	R. W. Denney, Mountain Grove
Douglas.....	M. C. Gentry, Ava.....	Robert M. Norman, Ava
Stoddard.....		
Vernon-Cedar...	C. Braxton Davis, Nevada.....	Roy W. Pearse, Nevada
Vernon-Cedar...		W. B. Richter, Stockton
Webster.....	C. R. Macdonnell, Marshfield...	Robert G. Beers, Marshfield

## HOUSE OF DELEGATES

First Meeting—Sunday, March 27, 1949—2:00 p. m.

Little Theatre, Municipal Auditorium

## Order of Business

Call to Order by the Speaker of the House.  
 Invocation.  
 Address of Welcome.  
 Preliminary Report of the Committee on Credentials.  
 Roll Call.  
 Report of the General Committee on Arrangements, C. Edgar Virden, M.D., Kansas City.  
 Report of the Local Committee on Arrangements, Victor B. Buhler, M.D., Kansas City.  
 Reading of Minutes of Previous Meeting. (Published in July 1948 Journal.)  
 Speaker's Instructions and Appointment of Reference Committees:  
   Amendments to Constitution and By-Laws.  
   Resolutions.  
   Miscellaneous Affairs.  
   Medical Education and Public Welfare.  
 Reading of President's Message and Recommendations, Robert Mueller, M.D., St. Louis.  
 Report of the Secretary, W. A. Bloom, M.D., Fayette.  
 Report of the Executive Secretary, T. R. O'Brien, St. Louis.  
 Report of the Treasurer, C. E. Hyndman, M.D., St. Louis.  
 Report of Standing and Special Committees:  
   Scientific Work: W. A. Bloom, M.D., Fayette, Chairman.  
   Postgraduate Course: Raymond O. Muether, M.D., St. Louis, Chairman.  
   Publication: G. V. Stryker, M.D., St. Louis, Chairman.  
   Public Policy and Public Relations: F. R. Crouch, M.D., Acting Chairman, Farmington.  
   Defense: C. E. Hyndman, M.D., St. Louis, Chairman.  
   Medical Education and Hospitals: Dudley S. Conley, M.D., Columbia, Chairman.  
   Cancer: E. C. Ernst, M.D., St. Louis, Chairman.  
   Medical Economics: Carl F. Vohs, M.D., St. Louis, Chairman.  
   Mental Health: E. F. Hctor, M.D., Farmington, Chairman.  
   Maternal Welfare: E. Lee Dorsett, M.D., St. Louis, Chairman.  
   Infant Care: G. V. Herrman, M.D., Kansas City, Chairman.  
   Health and Public Instruction: A. W. McAlester, III, M.D., Kansas City, Chairman.  
   Constitution and By-Laws: B. Landis Elliott, M.D., Kansas City, Chairman.  
   Fractures: Daniel L. Yancey, M.D., Springfield, Chairman.  
   Conservation of Eyesight: C. Souther Smith, M.D., Springfield, Chairman.  
   Control of Venereal Disease: A. W. Neilson, M.D., St. Louis, Chairman.  
   Industrial Health: V. T. Williams, M.D., Kansas City, Chairman.  
   Anesthesiology: Joseph McNearney, M.D., St. Louis, Chairman.  
   Physical Medicine:  
     Tuberculosis: E. E. Glenn, M.D., Springfield, Chairman.  
     Study of Cardiac Diseases: A. Graham Asher, M.D., Kansas City, Chairman.  
   Rural Medical Service: R. W. Kennedy, M.D., Marshall, Chairman.  
 Report of Council: J. W. Thompson, M.D., St. Louis, Chairman.  
 Appointment of Committee on Nominations.  
 Unfinished Business.  
 New Business.

Recessed Session—Monday, March 28, 1949—4:30 p. m.

Little Theatre, Municipal Auditorium

Supplementary Report of Committee on Credentials.  
 Report of Reference Committees:  
   Amendments to Constitution and By-Laws.  
   Resolutions.  
   Miscellaneous Affairs.  
   Medical Education and Public Welfare.  
 Report of the Council.





**"FOR ME  
ALWAYS"**

## Because **DARICRAFT**

1. is EASILY DIGESTED
2. has 400 U. S. P. Units of VITAMIN D per pint of evaporated milk.
3. has HIGH FOOD VALUE
4. has an IMPROVED FLAVOR
5. is HOMOGENIZED
6. is STERILIZED
7. is from INSPECTED HERDS
8. is SPECIALLY PROCESSED
9. is UNIFORM
10. will WHIP QUICKLY

**PRESCRIBED BY MANY DOCTORS**  
... You also may want to utilize Daricraft as a solution to your infant feeding problems, as well as in special diets for convalescents.

**PRODUCERS CREAMERY CO., SPRINGFIELD, MISSOURI**



Advertisement



**From where I sit**  
*by Joe Marsh*

## **Yes, Sir, Insomnia's Contagious!**

*Bud Swanson had trouble sleeping nights last summer. Tried to get over it by turning up the radio full blast and started an epidemic of insomnia all down the block!*

Folks finally dropped a hint to Bud that he close the windows or turn the radio a little lower. Bud did—and that was the quickest cure for *other* folks' insomnia I've ever heard of!

*Not that any of us object to the radio, or swing bands, or anything else that helps another person relax of an evening. (Myself, I like a glass of beer with a bit of cheese before I go to bed. I can't speak for you.)*

From where I sit, good neighborliness means nothing more than simply respecting the other person's tastes and rights—without forcing your own tastes or opinions down his throat. And that goes for Bud's radio, my glass of beer, or whatever temperate pleasure *you* happen to enjoy.

*Joe Marsh*

New Business.

Selection of Place of Next Meeting.

**Second Meeting—Wednesday, March 30, 1949—1:30 p. m.  
Little Theatre, Municipal Auditorium**

Report of Committee on Credentials.

Roll Call.

Reading of Minutes.

Election of Officers:

Election of President-Elect.

Report of Committee on Nominations.

Report of the Election of Councilors.

Installation of the President.

Nominations for Standing Committees by President and Confirmation by the House of Delegates.

Unfinished Business. (Report of Reference Committees and Council.)

## MISCELLANY

### JOINT MEETING OF THE KANSAS CITY DERMATOLOGICAL SOCIETY AND THE ST. LOUIS DERMATOLOGICAL SOCIETY

**Sunday, March 27, 1949**

#### Clinic, Kansas City General Hospital Program

2:00 p. m. Presentation of Clinical cases.

3:30 p. m. Discussion of Cases.

5:00 p. m. Adjournment.

6:00 p. m. Cocktails, Pine Room, Union Station.

7:00 p. m. Dinner, Pine Room, Union Station.

### THE MISSOURI SOCIETY FOR NEUROLOGY AND PSYCHIATRY

**Saturday and Sunday, March 26, 27, 1949,**

**Kansas City**

**Saturday, March 26**

12:30 p. m. Registration. Aztec Room, Hotel President.

1:30 p. m. Call to Order. Aztec Room, Hotel President.

1:30 p. m. Localization of Mental Function, Leland B. Alford, M.D., St. Louis.

2:00 p. m. Cerebral Schistosomiasis, F. A. Carmichael, Jr., M.D., Kansas City.

2:30 p. m. The Need of Belonging in War and Peace, Nathan Blackman, M.D., St. Louis.

3:00 p. m. A Case of Blepharospasm Treated with Electroshock Therapy, Frank J. Koenig, M.D., Kansas City.

3:30 p. m. Personality Changes After Prefrontal Lobotomy, Leopold Hofstatter, M.D., St. Louis.

4:00 p. m. The Present Situation in Missouri State Hospitals, Paul L. Barone, M.D., Nevada.

4:30 p. m. Organic Cerebral Lesions with Major Psychiatric Symptoms and Minimal Neurologic Signs, Walter D. Abbott, M.D., and Frank C. Coleman, M.D., Des Moines, Iowa.

6:30 p. m. Annual Dinner. Walnut Room, Hotel President. Winfred Overholser, M. D., Washington, D.C., Speaker.

**Sunday, March 27**

8:30 a. m. Meeting of the Council.

9:00 a. m. Business Meeting, Kansas Psychiatric Society. Room 229, Hotel President.

10:00 a. m. Business Meeting, Missouri Society for Neurology and Psychiatry. Aztec Room, Hotel President.

11:00 a. m. Organization and Business Meeting, Mid-Continent Psychiatric Association. Aztec Room, Hotel President.

12:15 p. m. Luncheon. Walnut Room, Hotel President. No speaker.

1:30 p. m. Call to Order. Room 503, Municipal Auditorium. Program to be presented by members of the Kansas Psychiatric Society.

All interested physicians are cordially invited to attend any or all of these meetings.

### MISSOURI CHAPTER, AMERICAN TRUDEAU SOCIETY

**Kansas City, March 27, 1949**

**Room 502, Municipal Auditorium**

Experiences With Resection for Pulmonary Tuberculosis, Francis M. Woods, M.D., Brookline, Mass.

Tuberculosis in Patients Over 50, John T. Kalish, M.D., and John Beem, M.D., Koch, Mo.

Streptomycin in the Treatment of Tuberculosis, William B. Tucker, M.D., Chief, Tuberculosis Service, Veterans Administration Hospital, Minneapolis, Minn.

Viro in Sections of the Lung and Their Identification, Malcolm B. Bawell, M.D., St. Louis.

Bronchiectasis, John Mayer, M.D., Kansas City.

Arterio-Venous Aneurysms of the Lung, Alfred Goldman, M.D., St. Louis.

Streptomycin in the Treatment of Nonpulmonary Tuberculosis, William B. Tucker, M.D., Minneapolis, Minn.

A business meeting will be held midway during the scientific session for the election of officers.

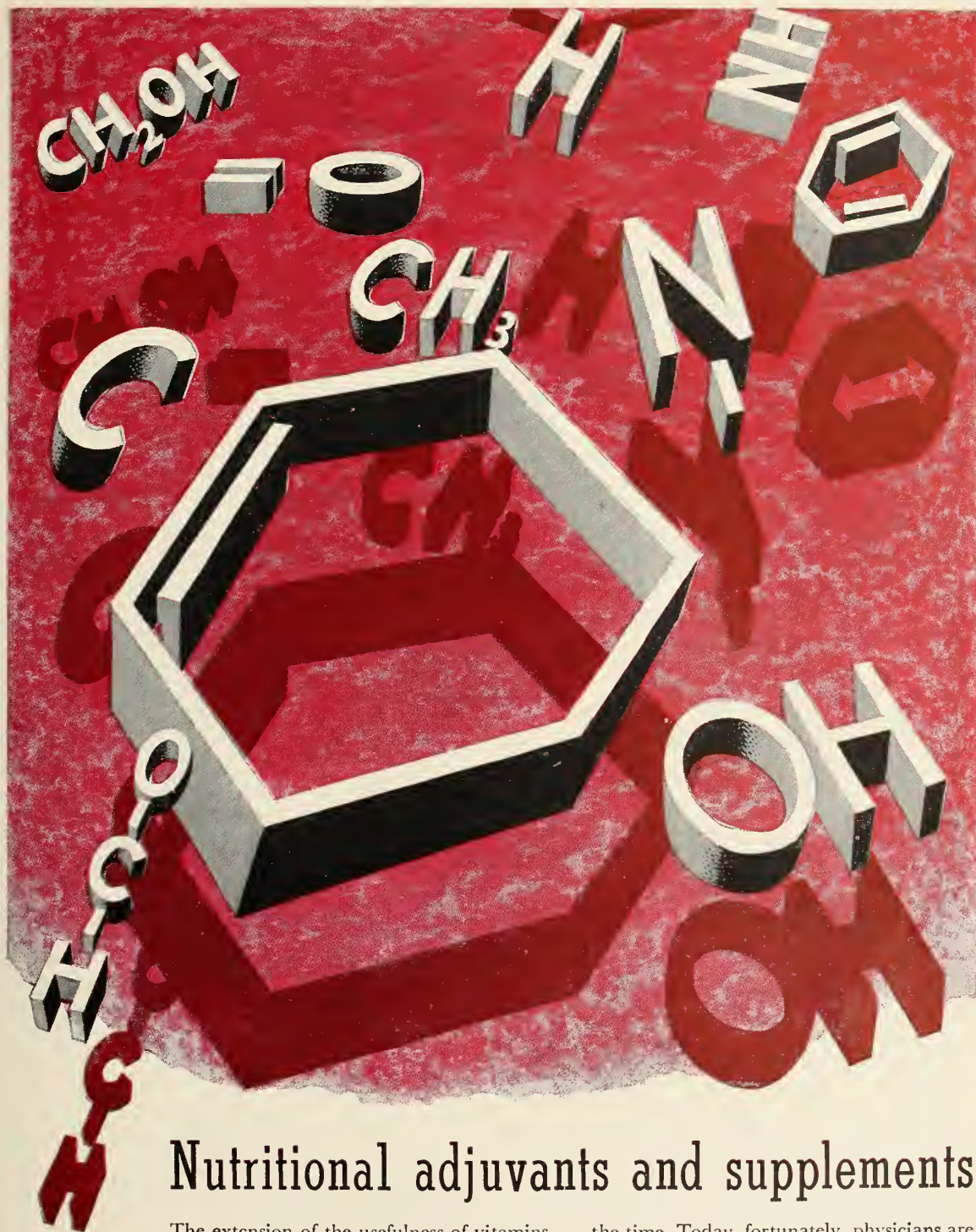
### KANSAS CITY SOUTHWEST PEDIATRIC SOCIETY The Children's Mercy Hospital

**March 26, 1949, Kansas City, 9:00 a. m.,**

**South Central Counties Medical Society**

The following program will be presented by the Kansas City Southwest Pediatric Society at the Children's Mercy Hospital in Kansas City on March 26, the day preceding the Annual Session of the Association. All members are invited to attend the program. The morning program will begin at 9:00 a. m. and the afternoon program will follow a luncheon at 12:00 noon.





## Nutritional adjuvants and supplements

The extension of the usefulness of vitamins, beyond the specific deficiencies which they cure and prevent, is a therapeutic phenomenon of the past decade. Those who specialize in nutritional disease have frequently emphasized to physicians the doctrine that every cell in the body needs every vitamin all of

the time. Today, fortunately, physicians are increasingly realizing the importance of the nutritional phase of medicine. Lederle has been pre-eminent in the vitamin field for many years. Its list of vitamin products includes combinations and single vitamins adequate for every clinical need.

**LEDERLE LABORATORIES DIVISION**

*AMERICAN Cyanamid COMPANY*  
30 ROCKEFELLER PLAZA • NEW YORK 20, N. Y.



**Morning Program**

Nephritis, R. C. Jefferies, M.D., Kansas City.  
 Kerosene Intoxication, F. A. Cornwell, M.D., Kansas City.  
 Diseases of the Newborn, Robert Henry, M.D., Kansas City.  
 Fluid Administration, S. F. Cockerell, M.D., Kansas City.  
 Hemangiomas, J. H. Gaskins, M.D., Kansas City.  
 BAL in Acrolynia, W. H. Crouch, M.D., Kansas City.  
 Enuresis, C. J. Eldridge, M.D., Kansas City.  
 Bone Tumors, David Francisco, M.D., Kansas City.  
 Osteomyelitis, C. L. Francisco, M.D., Kansas City.  
 Rheumatoid Arthritis, N. S. Pickard, M.D., Kansas City.  
 Poliomyelitis, F. S. Hogue, M.D., and R. H. Liene, M.D., Kansas City.  
 Pediatric Gynecology, J. P. Farney, M.D., Kansas City.  
 Routine of Southard School, Vernard Hall, M.D., Topeka, Kansas.  
 Psychiatry in Children, Albert Preston, M.D., Kansas City.  
 Organic Neurologic Lesions, A. T. Steegman, M.D., Kansas City.  
 Problems, Thomas Draney, Jr., M.D., Kansas City.  
 Diabetes in Children, David Howard, M.D., Kansas City.  
 Hernias, J. G. Montgomery, M.D., Kansas City.  
 Appendicitis, E. O. Parsons, M.D., Kansas City.  
 Intestinal Obstruction, W. W. Greene, M.D., Kansas City.  
 Pyloric Stenosis, Richard Twyman, M.D., and E. A. Wilkinson, M.D., Kansas City.  
 Movie on Epiphysitis by Joseph Brennanem.

**Afternoon Program**

Diphtheria, J. M. Kantor, M.D., Kansas City.  
 Pathologic Review, E. C. H. Schmidt, M.D., Kansas City.  
 Ocular Diseases of Childhood, W. R. Eubank, M.D., and A. J. Baer, M.D., Kansas City.  
 Immunization, W. Roger Moore, M.D., St. Joseph.  
 Infant Feeding, Urban Busick, M.D., Springfield.  
 Skin Cancer in Children, David Morgan, M.D., Kansas City.  
 Rheumatic Fever, Don Carlos Peete, M.D., Kansas City.  
 Congenital Heart, Postoperative, John Mayer, Jr., M.D., and H. M. Gilkey, M.D., Kansas City.  
 Electrocardiogram, Lawrence Steffen, M.D., Kansas City.  
 Pyelitis, Hjalmar E. Carlson, M.D., Kansas City.  
 Histoplasmosis, Michael Furculow, M.D., Kansas City.  
 Pediatric Emergencies, George Stafford, M.D., Lincoln, Nebraska.  
 Diarrhea in the Newborn, D. R. Davis, M.D., and Paul Ensign, M.D., Emporia, Kansas.

**FARM BUREAU OPPOSES NATIONAL PROGRAM OF COMPULSORY HEALTH INSURANCE**

The *Missouri Farm Bureau News* of February 9, under the same heading, carried the following article with the subhead "Such Programs Aggravate the Problem President Slusher Tells National Health Meeting."

"Opposition to the national compulsory health insurance program was expressed by H. E. Slusher, president of the Missouri Farm Bureau Federation and chairman of the American Farm Bureau Federation rural health committee.

"Mr. Slusher, speaking last Friday (February 4) before the National Conference on Rural Health at the Palmer House, Chicago, said:

"The American Farm Bureau Federation still believes in the philosophy that the greatness of this country rests upon the willingness of the individual to cooperate with his neighbor to find the solution to all his social and economic problems; that government should be for the people and not the people pawns of the government."

"He said the Farm Bureau realizes that 'American medical service at its best reaches only a relatively small part of the rural areas of the country.' Nevertheless, he added, it has gone on record with a resolution saying:

**"Voluntary Best**

"We believe the problem of improved health can best be met by the voluntary organization of cooperative health associations which will encourage people to take advantage of the services available for any medical or dental care which they may require.

"We favor voluntary plans providing medical, health, dental and hospital insurance. We urge that facilities of medical schools be expanded and every effort be made otherwise to train more physicians, surgeons, dentists, nurses, technicians and general practitioners and public health doctors. We recommend the full cooperation of rural people with our established health units and existing health programs, including immunization clinics, nutrition courses and home nursing.

"We believe greater emphasis should be given to preventive medicine. . . . To the extent Federal grants are needed by way of assistance, such grants should be made to states on the basis of need, with state governments responsible for the allocation and administration of these funds."

**"Foreign Failures**

"The Farm Bureau, Mr. Slusher added, has not recognized 'the need for nor feasibility of a national compulsory health insurance program.' He cited the experiences in England, Austria and Germany, saying 'such programs have in no way solved the health problem.'

"Rather such programs have aggravated the problem," he said. "The service and quality of medical care is much poorer than before the plan was put into effect. The integrity of the physicians is now of a low standard, and medical service costs are extremely high in comparison with services rendered. Under such programs there can be no such thing as health insurance, and it is wrong in every sense of the word to tell the public that there will be."

**"Education First**

"Mr. Slusher said the Farm Bureau's health program has as its first step education.

"And by education I mean an awareness on the part of the individual that there is really a health problem," he said. "Then recognizing the problem, to study the possibility of solving it locally insofar as possible without government help. Cooperation with the medical profession has always been encouraged. State and county health councils have been organized. Cooperation in every way possible has been given to the state health departments.

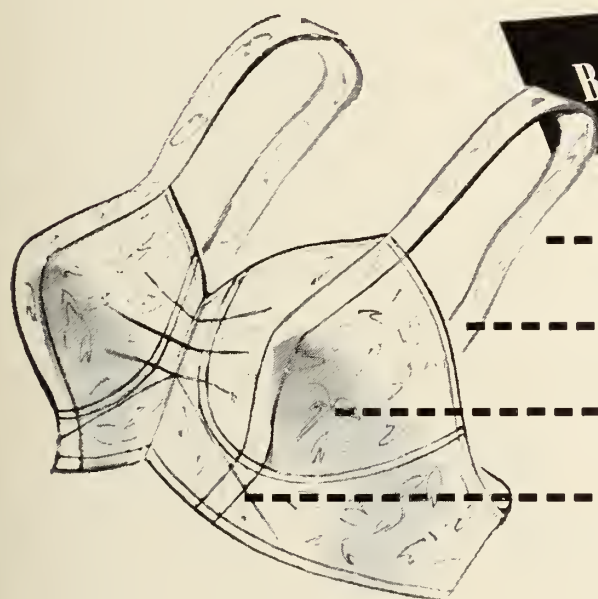
"Many of our state Farm Bureaus maintain full time health directors and cooperate actively with all state health groups. Many of these state Farm Bureaus sponsor Blue Cross hospital and Blue Shield medical-surgical programs. A few states have their own health insurance programs which are a part of their regular overall life insurance program. All of these programs are tied into the education activities of the organization.



*an aid in treatment of specific breast conditions*

# Lov-e' CORRECTIVE BRASSIERES

*are custom-fitted to prescription...*



## BASIC LOV-E' FITTING TECHNIQUE

- Straps adjusted for maximum comfort with gentle-yet-firm support.
- Back width designed to encourage good posture.
- Correct bust cup selected for proper uplift and separation.
- Torso fitted to patient's personal measurements.

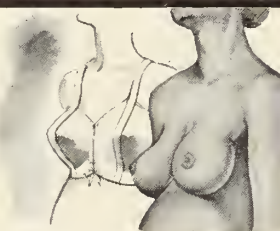
Proper physiological support for the breast is a medical problem, and patients are grateful to the physician who recognizes this fact. Lov-e's extensive therapeutic line of breast supports provides remedial support for specific breast conditions. From more than 500 bust-cup-torso size variations, the patient's correct size is selected, then fitted to her *individual measurements* by specially trained Lov-e' technicians, according to your exact instructions.

*Lov-e' Brassieres are available in a wide variety of all fine fabrics including cottons, rayon jacquards and nylons. Also available: sleeping brassieres, hospital binders, artificial breasts, muscle pads and maternity garter supports.*

LOV-E SECTION  
CORSET DEPARTMENT  
FAMOUS-BARR CO., ST. LOUIS

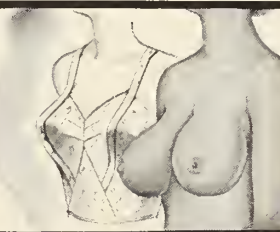
### MATERNITY

— for pre-natal and post-natal. Helps prevent leakage. Adjusted without charge during pregnancy.



### HYPERTROPHIC

— inner pocket for pendulous bust. Built up back. Padded shoulder straps. Redistributes bust weight.



### MASTECTOMY

— fitted with Lov-e' bust pads to restore bust contour. Aids psychologically.



### "Legislation Next

"Recognizing that education can only go so far in solving the problem, the second step in the program is legislation. We suggest national legislation to help finance county hospitals and county health units on the basis of need. However, we feel that such programs should be on the basis of grants-in-aid and with a minimum of federal control.

"At the state level, we assist insofar as possible in getting necessary enabling legislation passed to meet the requirements of the national legislation."

## ORGANIZATION ACTIVITIES

### FINANCIAL STATEMENT FOR 1948

ROBERT A. LENNERTSON  
CERTIFIED PUBLIC ACCOUNTANT  
MEMBER—AMERICAN INSTITUTE OF ACCOUNTANTS  
SAINT LOUIS, MISSOURI

February 14, 1949

Missouri State Medical Association,  
634 North Grand Boulevard,  
St. Louis, Missouri.

#### Gentlemen:

An examination has been made of the accounts of the Missouri State Medical Association for the year 1948 and presented herewith is a report thereon together with the following attached exhibits:

- Exhibit A. Balance Sheet.
- Exhibit B. Statement of Income and Expenses.
- Exhibit C. Statement of Committee and Meeting Expenses.
- Exhibit D. Dues receivable and Membership by Counties.

#### Scope of Examination

The Balance Sheet as at December 31, 1948, and the Statement of Income and Expenses for the year 1948 were reviewed. Examinations or tests were made of accounting records in the manner and to the extent deemed appropriate under the circumstances, without making a detailed audit of the transactions.

Cash in banks as shown by the books was reconciled with the regular monthly bank statements and confirmation letters received direct from the depositories. The petty cash fund of \$25.00 and United States Savings Bonds Series G with a par value of \$55,000.00 were verified by physical inspection. Recorded cash receipts for dues, rentals, JOURNAL income and interest on bonds, were traced in total into the bank account as deposits. Disbursements for the year were substantiated by an inspection of paid checks, purchase invoices and other data on file. Selective tests were made of the income and expense accounts for the period. It was noted that space was contributed by THE JOURNAL for publication of advertisements by the United States Treasury in connection with Savings Bonds, and advertisements by the American Medical Association in connection with the magazine *Hygeia*.

#### Statement of Income and Expenses

The financial result of the Association's activities for the year 1948, after meeting all ascertained expenses, was an excess of income in the amount of \$3,293.23 as set forth in Exhibit B. Members' Dues are taken into income on a cash basis as collected whereas all other accounts are maintained on the accrual basis.

#### Balance Sheet

Exhibit A presents the asset and liability accounts of the Association at December 31, 1948, and comments follow on the more important Balance Sheet accounts not previously discussed.

Accounts Receivable from JOURNAL advertisers were reviewed and are summarized below as to date of charge:

Month of Charge	Amount
December 1948	\$1,164.76
November 1948	15.90
October 1948	13.20
September 1948	27.60
August 1948	13.20
May 1948	28.80
Total	\$1,263.46

Unpaid Members' Dues in the sum of \$172.50, offset by a reserve account in a like amount, represent 1948 dues of delinquent members carried at the request of local societies upon their assurance of payment. Other individuals with delinquent dues at December 31, 1948, were dropped from membership in accordance with the by-laws. A summary of Dues Receivable and Membership by Counties, as shown by the Association's records, is presented in Exhibit D.

Furniture and Fixtures continue to be stated in the fixed

amount of \$1,000.00, purchases during the year having been charged to expense in lieu of depreciation.

Records and data on file were carefully reviewed for liabilities at December 31, 1948, and it is believed that all current liabilities are included in the Balance Sheet. There is a contingent liability in the sum of \$900.00 on three malpractice suits reported pending against members. The Association is required to furnish assistance in an amount not to exceed \$300.00 in each case under the provisions of its by-laws.

Advance payments in the sum of \$1,912.50 were made by exhibitors to December 31, 1948, and these payments will be taken into income when earned in 1949.

#### General

The following insurance was in force at the close of the year:

Insurance On	Type of Coverage	Amount
Furniture and Fixtures	Fire	\$2,000.00
Treasurer	Fidelity Bond	20,000.00
Executive Secretary	Fidelity Bond	2,000.00
Automobile—Executive	Bodily Injury	15/30,000.00
Secretary	Property Damage	5,000.00
Automobile—Field	Bodily Injury	15/30,000.00
Secretary	Property Damage	5,000.00
Automobile of Executive and Field Secretary	Non-Ownership—Bodily Injury	25/50,000.00
Employee	Property Damage	5,000.00
	Life Endowment Policy with Disability Benefits (Cash Value \$3,389.08)	12,000.00

The records of the Association have been well maintained during the year 1948 in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding period.

Yours very truly,

R. A. LENNERTSON,  
Certified Public Accountant.

EXHIBIT A

### Missouri State Medical Association Balance Sheet, December 31, 1948

#### ASSETS

Cash		
Mercantile-Commerce Bank and Trust Company (Treasurer's Account) . . .	\$20,331.07	
Mercantile-Commerce National Bank (Secretary's Account) . . . . .	338.36	
Petty Cash Fund . . . . .	25.00	\$20,694.43
U. S. Savings Bonds—Series G—Cost and Par Value		55,000.00
Accounts Receivable—Advertisers . . . . .		1,263.46
Dues Receivable—Exhibit D . . . . .		172.50
Furniture and Fixtures . . . . .		1,000.00
Advances for Traveling Expenses . . . . .		162.72
		<u>\$78,293.11</u>

#### LIABILITIES

Accounts Payable		
Supplies and Expenses . . . . .	\$ 612.07	
Accrued Salary—Treasurer . . . . .	1.00	
Federal Withholding, Social Security and City Earnings Taxes . . . . .	774.98	\$ 1,388.05
Deferred Credit to Income		
Advance Payments by Exhibitors . . . . .		1,912.50
Contingent Liability to Members on three malpractice suits—\$900.00		
Reserve for Uncollected Dues . . . . .		172.50
Reserve for Future Activities		
Balance January 1, 1948 . . . . .	\$71,526.83	
Add: Excess of Income over Expenses for the year 1948 per Exhibit B. . . . .	3,293.23	74,820.06
		<u>\$78,293.11</u>

EXHIBIT B

### Missouri State Medical Association Statement of Income and Expenses for the Year 1948

Particulars	General Activities	JOURNAL Publication	Together
INCOME			
Dues received (Includes \$1.00 per member annually for THE JOURNAL) . . . . .	\$40,629.00	\$ 3,144.00	\$43,773.00
Rentals—Annual session exhibit space . . . . .	7,850.00		7,850.00
Rent from sub-tenant (office space) . . . . .	690.00		690.00
Subscriptions to THE JOURNAL—Nonmembers . . . . .		92.20	92.20
Advertising space—THE JOURNAL . . . . .		20,650.67	20,650.67
Interest on U. S. Savings Bonds . . . . .	1,375.00		1,375.00
Total Income . . . . .	\$50,544.00	\$23,886.87	\$74,430.87



# COSMO CAUTERY COMPANY

4215 Virginia Ave. St. Louis 11, Mo.

Established 1936

## CERVIX COAGULATOR



Actual Size  $9\frac{5}{8}$  Inches

Only \$26.50  
Complete

## The Cervix Coagulator

For the treatment of endocervicitis, cervical cysts, cervical erosions.



## The Cosmo Cautery Unit

For the removal of superficial skin blemishes, warts, moles, skin tabs.



Doctors report gratifying results with these compact, easy to operate units. Offer most gentle yet effective treatment. Patient discomfort at a minimum. Complete units include all parts illustrated and handsome leatherette covered carrying case.



## Outstanding Features

1. Compactness and simplicity of operation
2. Can be used on 110 AC or DC current
3. Fingertip control switch
4. Results free of stenosis and scar tissue
5. Work may be done in office
6. No anesthesia required
7. No sparks or cherry red heat
8. Interchangeable silver applicators
9. Controlled low heat, eliminating nauseating smoke and odor of searing tissue
10. Noiseless, no radio interference

These instruments are guaranteed for one year against defective material or workmanship by the Cosmo Cautery Co.

## COSMO CAUTERY UNIT



Actual Size  $6\frac{3}{8}$  Inches

Only \$22.50  
Complete

## Write Your Surgical Dealer For Descriptive Literature

A. S. ALOE CO.  
1831 Olive Street  
St. Louis, 3, Mo.

A. S. ALOE CO.  
Bryant Building  
Kansas City, Mo.

HAMILTON-SCHMIDT SURGICAL CO.  
215 North Tenth Street  
St. Louis, 1, Mo.

EDMUND F. HANLEY MEDICAL EQUIPMENT CO.  
1021 N. Grand Avenue  
St. Louis, 6, Mo.

CHARLES A. SCHMIDT INSTRUMENT CO.  
3689 Olive Street  
St. Louis, 8, Mo.

## EXPENSES

Salary—Executive Secretary .....	\$ 4,733.34	\$ 2,366.66	\$ 7,100.00
Salary—Treasurer .....	1.00		1.00
Office Salaries .....	12,893.28	6,446.64	19,339.92
Employee's Retirement Insurance Premium .....	903.72		903.72
Office Rent and Light .....	2,451.25		2,451.25
Postage .....	1,227.90	386.92	1,614.82
Stationery, Printing and Office Supplies .....	1,407.03		1,407.03
Directories and Clipping Service .....	640.80		640.80
THE JOURNAL—Paper, Printing, Mailing, Etc. ....		15,177.13	15,177.13
Cash Discounts to Advertisers .....		42.93	42.93
Commissions on JOURNAL Advertising .....		1,433.91	1,433.91
Discounts to Exhibitors .....	12.50		12.50
Telephone and Telegraph .....	1,076.57		1,076.57
Insurance—General .....	109.32		109.32
Fees and General Expenses .....	908.78		908.78
Taxes—Social Security and Personal Property .....	229.14		229.14
Bad Debts .....	125.00		125.00
Traveling Expense—Executive Secretary .....	961.12		961.12
Traveling Expense—Field Secretary .....	1,642.22		1,642.22
Traveling Expense—General, Committee and Meeting Expenses (Exhibit C) .....	15,114.22		15,114.22
Equipment Purchases and Repairs in lieu of Depreciation .....	318.48		318.48
Total Expenses .....	\$45,283.45	\$25,854.19	\$71,137.64
Net Income for the Period .....	\$ 5,260.55	\$ (1,967.32)	\$ 3,293.23

## EXHIBIT C

Missouri State Medical Association  
Statement of Committee and Meeting Expenses  
for the Year 1948

Annual Session .....	\$ 7,004.61
Council Meetings and Councilors' Expenses .....	\$ 2,919.53
Delegates to A. M. A. ....	585.00
Women's Auxiliary .....	530.89
Committees:	
Conservation of Eyesight .....	\$ 107.74
Rural Medicine .....	434.66
Medical Defense .....	450.00
Health and Public Instruction .....	50.25
Post-graduate Instruction .....	470.88
Public Policy and Relations .....	2,437.85
Scientific Work .....	39.75
Tuberculosis .....	83.06
	4,074.19
	\$15,114.22

## EXHIBIT D

Missouri State Medical Association  
Dues Receivable and Membership by Counties  
December 31, 1948

## MEMBERSHIP

Counties	Total	Active	Junior	Honor	1948 Dues*	Pre-paid Dues
Andrew .....	6	6				
Audrain .....	13	11		2		
Barton-Dade .....	9	7		2		
Bates .....	12	11		1		
Benton .....	3		1	2		
Boone .....	50	47	1	2		
Buchanan .....	100	80	1	19		
Butler .....	21	19		2		
Caldwell-Livingston .....	15	15				
Callaway .....	19	10	1	8		\$ 7.50
Camden .....	2	2				
Cape Girardeau .....	40	33	1	6		
Carroll .....	6	6				
Carter-Shannon .....	5	5				
Cass .....	14	11	1	2		
Chariton-Macon-Monroe-Randolph .....	41	27		14		
Clay .....	36	34	1	1		
Clinton .....	7	7				
Cole .....	37	34		2	\$ 15.00	30.00
Cooper .....	14	14				
Dallas-Hickory-Polk .....	12	10		2		
DeKalb .....	2	2				
Dunklin .....	26	22	1	3		
Franklin .....	30	26	2	2		

Greene .....	114	101	3	10		
Grundy-Davless .....	13	11		2		
Harrison .....	3	3				
Henry .....	15	14		1		
Holt .....	5	3		2		
Howard .....	5	5				
Jackson .....	660	513	37	109	7.50	
Jasper .....	68	54		13	15.00	
Jefferson .....	14	14				
Johnson .....	12	12				
Laclede .....	11	10	1			
Lafayette .....	18	17		1		
Lewis-Clark-Scotland .....	6	6				
Lincoln .....	8	6		2		
Linn .....	12	10		2		
Marion-Ralls .....	28	26		2		
Mercer .....	10	6	2	2		
Miller .....	4	4				
Mississippi .....	7	6		1		
Moniteau .....	6	6				
Montgomery .....	5	5				
Morgan .....	2	2				
New Madrid .....	9	9				
Newton .....	14	14				
Nodaway-Atchison-Gentry-Worth .....	26	26				30.00
North Central (Adair, Schuyler, Knox, Sullivan, Putnam) .....	24	21		3		
Ozark Medical Society (Barry, Christian, Lawrence, Stone, Taney) .....	41	36	1	4		
Pemiscot .....	15	15				
Perry .....	6	6				
Pettis .....	33	28		5		
Phelps-Crawford-Dent-Pulaski .....	29	26		3		
Pike .....	12	10		2		
Platte .....	5	5				
Ray .....	7	6		1		
St. Charles .....	19	18		1		
St. Francois-Iron-Madison-Washington-Reynolds .....	35	31		4		
St. Genevieve .....	4	4				
St. Louis County .....	258	230	14	13	15.00	139.00
St. Louis County (New members 1/1/49) .....						72.00
St. Louis Medical Society .....	1,309	1,060	160	76	120.00	22.50
St. Louis Medical Society (New members 1/1/49) ..						324.50
Saline .....	19	19				
Scott .....	15	14	1			
Shelby .....	4	4				
South Central (Howell, Oregon, Texas, Wright, Douglas) ..	22	19	1	2		
Stoddard .....	7	7				
Vernon-Cedar .....	16	13		3		
Webster .....	3	2	1			
Totals .....	3,478	2,896	231	334	\$172.50	\$625.50

\*Delinquent dues of members carried at the request of local societies upon their assurance of payment.

## Budget for 1949

Salaries .....	\$25,800.00
JOURNAL Expense .....	16,000.00
Postage and Express .....	1,000.00
Printing and Stationery .....	2,000.00
Travel, Executive Secretary .....	1,200.00
Travel, Field Secretary .....	2,000.00
Telephone and Telegraph .....	1,000.00
Office Rent and Light .....	2,800.00
Meetings, Committee Expense .....	12,000.00
Defense .....	500.00
Postgraduate .....	1,000.00
Woman's Auxiliary .....	500.00
Public Relations .....	4,500.00
Insurance Annuity .....	950.00
Miscellaneous—General Expense .....	2,000.00
Furniture and Fixtures .....	500.00
Social Security Tax .....	175.00
Total .....	\$73,925.00



### AMENDMENT TO THE CONSTITUTION

This is the second publication of the amendment submitted to the House of Delegates at the 1948 Annual Session by the Committee on Constitution and By-Laws at the request of Park J. White, M.D., St. Louis. The Constitution requires three publications of an amendment to the Constitution and requires it be held one year prior to action by the House of Delegates.

Amend Article IV of the Constitution by eliminating the word "white" so that when amended the article will read: "Article IV—Composition of the Association. This Association shall consist of members who shall be members of the component county medical societies to which only physicians shall be eligible who have been certified to the headquarters of this Association and whose dues and assessments for the current year have been received by the Secretary."

### COUNTY SOCIETY HONOR ROLL 1949

(Societies which have paid Dues for All Members and date placed on Honor Roll)

Miller County Medical Society, December 8, 1948.

Camden County Medical Society, December 10, 1948.

Benton County Medical Society, December 14, 1948.

Ste. Genevieve County Medical Society, December 16, 1948.

Laclede County Medical Society, December 18, 1948.

Dallas, Hickory, Polk Counties Medical Society, December 23, 1948.

Carter-Shannon County Medical Society, December 30, 1948.

Lewis, Clark, Scotland Counties Medical Society, January 3, 1949.

Audrain County Medical Society, January 5, 1949.

Webster County Medical Society, January 8, 1949.

Harrison County Medical Society, January 10, 1949.

Mississippi County Medical Society, January 12, 1949.

Howard County Medical Society, January 15, 1949.

Henry County Medical Society, January 16, 1949.

Morgan County Medical Society, January 19, 1949.

Callaway County Medical Society, January 21, 1949.

Carroll County Medical Society, January 24, 1949.

Pettis County Medical Society, January 26, 1949.

Holt County Medical Society, January 29, 1949.

Cape Girardeau County Medical Society, February 1, 1949.

Bates County Medical Society, February 8, 1949.

Mercer County Medical Society, February 8, 1949.

Pike County Medical Society, February 9, 1949.

See You at Booth 15

## Massachusetts Indemnity Insurance Co.

C. E. HOVEY

General Agent

J. R. McKNIGHT

Formerly of Blue Cross  
Regional Supervisor

**Noncancellable—Guaranteed Renewable—Incontestable  
Disability Insurance**

Five-o-six Olive Street

Saint Louis



## The Mary E. Pogue School

Complete facilities for training Retarded and Epileptic children educationally and socially. Pupils per teacher strictly limited. Excellent educational, physical and occupational therapy programs.

Recreational facilities include riding, group games, selected movies under competent supervision of skilled personnel.

Catalogue on request.

G. H. Marquardt, M.D. Barclay J. MacGregor  
Medical Director Registrar

27 Geneva Road, Wheaton, Illinois  
(Near Chicago)

## AT HOME OR AWAY

## SPOT TESTS

## SIMPLIFY URINALYSIS

### No Test Tubes • No Measuring • No Boiling

Diabetics welcome "Spot Tests" (ready to use dry reagents), because of the ease and simplicity in using. No test tubes, no boiling, no measuring; just a little powder, a little urine—color reaction occurs at once if sugar or acetone is present.

### Galatest... Acetone Test (Denco)

FOR DETECTION OF  
SUGAR IN THE URINE

FOR DETECTION OF  
ACETONE IN THE URINE

### SAME SIMPLE TECHNIQUE FOR BOTH

#### 1. A LITTLE POWDER

#### 2. A LITTLE URINE



COLOR REACTION IMMEDIATELY

A carrying case containing one vial of Acetone Test (Denco) and one vial of Galatest is now available. This is very convenient for the medical bag or for the diabetic patient. The case also contains a medicine dropper and a Galatest color chart. This handy kit or refills of Acetone Test (Denco) and Galatest are obtainable at all prescription pharmacies and surgical supply houses.

Accepted for advertising in the Journal of the A.M.A.  
WRITE FOR DESCRIPTIVE LITERATURE

*Acetone Test (Denco)... Galatest*  
**The Denver Chemical Manufacturing Co., Inc.**  
163 Varick Street, New York 13, N. Y.

### Cook County Graduate School of Medicine Announces Continuous Courses

**SURGERY**—Intensive Course in Surgical Technique, two weeks, starting March 21, April 18, May 16. Surgical Technique, Surgical Anatomy & Clinical Surgery, four weeks, starting March 7, April 4, May 2. Surgical Anatomy & Clinical Surgery, two weeks, starting March 21, April 18, May 16. Surgery of Colon & Rectum, one week, starting March 7, April 11. Esophageal Surgery, one week, starting June 13. Thoracic Surgery, one week, starting June 20. Breast & Thyroid Surgery, one week, starting June 27.

**GYNECOLOGY**—Intensive Course, two weeks, starting March 21, April 18, June 20. Vaginal Approach to Pelvic Surgery, one week, starting April 4, May 16.

**OBSTETRICS**—Intensive Course, two weeks, starting March 7, April 4.

**MEDICINE**—Intensive Course, two weeks, starting April 4.

Electrocardiography & Heart Disease, four weeks, starting March 16.

Personal Course in Gastroscopy, two weeks, starting March 7, May 16.

Diagnosis & Treatment of Congenital Malformation of Heart, two weeks, starting June 13.

**PEDIATRICS**—Intensive Course, two weeks, starting April 4.

**DERMATOLOGY**—Formal Course, two weeks, starting May 2.

**CYSTOSCOPY**—Ten Day Practical Course every two weeks.

**UROLOGY**—Intensive Course, two weeks, starting April 18.

**GENERAL, INTENSIVE AND SPECIAL COURSES IN ALL BRANCHES OF MEDICINE, SURGERY AND THE SPECIALTIES.**

Teaching Faculty—Attending Staff, Cook County Hospital  
Registrar, 427 South Honore St., Chicago 12, Ill.

*All worth while laboratory examinations; including—*

Tissue Diagnosis

The Wassermann and Kahn Tests

Blood Chemistry

Bacteriology and Clinical Pathology

X-Ray including Gastro-Intestinal Study and Gall Bladder Visualization

Basal Metabolism

Pregnancy Test

Electrocardiograms with interpretation

### National Pathological Laboratory

RALPH L. THOMPSON, M.D., Director

601-616 University Club Bldg.

ST. LOUIS

Telephone Jefferson 6088

### ACCIDENT • HOSPITAL • SICKNESS

# INSURANCE

FOR PHYSICIANS, SURGEONS, DENTISTS EXCLUSIVELY



<b>\$5,000.00 accidental death</b>	<b>\$ 8.00</b>
\$25.00 weekly indemnity, accident and sickness quarterly	
<b>\$10,000.00 accidental death</b>	<b>\$16.00</b>
\$50.00 weekly indemnity, accident and sickness quarterly	
<b>\$15,000.00 accidental death</b>	<b>\$24.00</b>
\$75.00 weekly indemnity, accident and sickness quarterly	
<b>\$20,000.00 accidental death</b>	<b>\$32.00</b>
\$100.00 weekly indemnity, accident and sickness quarterly	

Also Hospital Expense for Members  
Wives and Children

85c out of each \$1.00 gross income used for members' benefit

**INVESTED ASSETS** **PAID FOR CLAIMS**  
**\$3,000,000.00** **\$15,000,000.00**

\$200,000.00 deposited with State of Nebraska for protection of our members.

Disability need not be incurred in line of duty—benefits from the beginning day of disability

**PHYSICIANS CASUALTY ASSOCIATION**  
**PHYSICIANS HEALTH ASSOCIATION**

46 years under the same management  
400 First National Bank Building, OMAHA 2, NEBRASKA



# *Make Reservations Early*

## **HOTEL RESERVATIONS**

*for*

**91st Annual Session, Kansas City**

**March 27, 28, 29, 30, 1949**

*Members are requested to make reservations directly with  
the hotel of their choice.*

In case of difficulty concerning reservation, contact the Committee on Hotels: DRs. JAMES W. DOWNEY, *Chairman*; MARTIN P. HUNTER, DAVID B. MORGAN, R. C. FREDEEN, EDWARD H. KLEIN, ROBERT J. MURPHY, M. L. FRIEDMAN, ROBERT A. MOORE.

**President Hotel, 14th and Baltimore**

*(Headquarters, Missouri State Medical  
Association)*

Single room \$3.50 to \$5.50; double \$5.00 to  
\$7.50; twin bedded room \$7.00 to \$9.00.

**Muehlebach Hotel, 12th and Baltimore**

Single room \$4.00 to \$8.00; double \$6.00 to  
\$10.00; twin bedded room \$7.00 to \$12.00.

**Ambassador Hotel, Broadway and  
Knickerbocker**

Single room \$2.50 to \$5.00; double \$3.50 to  
\$7.00; twin bedded room \$4.50 to \$8.00.

**Bellerive Hotel, 214 E. Armour**

Single room \$4.50 to \$6.00; double \$6.50 to  
\$9.00; twin bedded room \$6.50 to \$9.00.

**Commonwealth Hotel, 11th and Baltimore**

Single room \$3.00 to \$4.00; double \$4.00 to  
\$6.00; twin bedded room \$4.50 to \$7.00.

**Continental Hotel, 11th and Baltimore**

Single room \$3.00 to \$5.00; double \$4.50 to  
\$6.00; twin bedded room \$6.00 to \$9.00.

**Phillips Hotel, 12th and Baltimore**

Single room \$3.00 to \$5.00; double \$5.00 to  
\$8.00; twin bedded room \$7.00 to \$8.00.

**Pickwick Hotel, 10th and McGee**

Single room \$3.25 to \$5.00; double \$4.75 to  
\$7.00; twin bedded room \$5.50 to \$7.00.

## SOCIETY PROCEEDINGS

### FOURTH COUNCILOR DISTRICT

OTTO W. KOCH, CLAYTON, COUNCILOR

#### St. Louis County Medical Society

The St. Louis County Medical Society met January 26 at 8:30 p. m. at the Health Center, St. Louis County Hospital.

John O'Connell, M.D., invited members of the society to hear a wire recording of the recent talk by Dr. Morris Fishbein on "Health Insurance" at his home on February 16.

On motion the date for the annual dinner was set for May 18, 1949.

Richard Sutter, M.D., reported on a meeting on industrial health held in Chicago on January 18 and 19 and told of a resolution adopted favoring limitation of care by industrial physicians to accidents and illness incurred as a result of employment, with care of all other medical problems to be handled by the family physician.

Clinton W. Lane, M.D., St. Louis, spoke on "Dermatitis of External Origin," illustrating his address with color slides. Discussion was participated in by Drs. Vitale, O'Connell, Brown, Backlar, Rosenberg, Graeser, Schattyn, Jones and Sutter. The speaker was given a rising vote of thanks.

ROBERT C. KINGSLAND, M.D., Secretary.

### NINTH COUNCILOR DISTRICT

E. C. BOHRER, WEST PLAINS, COUNCILOR

#### South Central Counties Medical Society

The South Central Counties Medical Society met for dinner at the Antlers Cafe in Mountain Grove on January 21 with the following present: Drs. J. A. Fuson, Mansfield; R. A. Ryan, H. G. Frame, R. W. Denney and A. C. Ames, Mountain Grove; Garrett Hogg, Cabool; T. J. Burns, Houston; E. C. Bohrer, West Plains, and John S. Skinner, St. Louis.

Following dinner Dr. Hogg, the president, called the meeting to order in the office of Dr. Frame.

Dr. Skinner presented a talk on "Congestive Heart Failure."

A vote of thanks was given the speaker and the meeting adjourned to meet in Cabool on February 18.

A. C. AMES, M.D., Secretary.

### TENTH COUNCILOR DISTRICT

FRANK W. HALL, CAPE GIRARDEAU, COUNCILOR

#### Ste. Genevieve County Medical Society

The Ste. Genevieve County Medical Society held its annual meeting on December 15 with the president, R. C. Lanning, M.D., in the chair. All members were present.

Minutes of the last meeting were read and approved.

The following officers were elected: President, A. E. Sexauer, M.D.; vice president, C. J. Clapsaddle, M.D.; secretary-treasurer, R. W. Lanning, M.D.; delegate, R. C. Lanning, M.D.; board of censors, C. J. Clapsaddle, M.D.

The meeting adjourned to convene on the second Wednesday in January.

R. W. LANNING, M.D., Secretary.

## BOOK REVIEWS

ENCYCLOPEDIA OF MEDICAL SOURCES. By Emerson Crosby Kelly, M.D., Associate Professor of Surgery, Albany Medical College; Attending Surgeon, Albany Hospital; Editor, Medical Classics. The Williams & Wilkins Company. Baltimore. 1948. Price \$7.50.

This volume is an excellent book for the doctor who not only likes to keep up to date on current medical literature but also enjoys connecting facts with the people who made them facts.

The author has done an excellent job of assembling pertinent data in regard to original articles and eponymus. It is highly entertaining as well as instructive to be able to reach out your hand and find out just when and where important contributions to medical knowledge were made.

The organization is like that of a dictionary with alphabetical listings of proper names, thus making it simple to locate facts.

B. Z. H.

AN INTRODUCTION TO GASTRO-ENTEROLOGY. Fourth Edition, Revised and Enlarged. By Walter C. Alvarez, Professor of Medicine, University of Minnesota; The Mayo Foundation, and a Senior Consultant in the Division of Medicine, the Mayo Clinic. With 269 Illustrations. Published by Paul B. Hoeber, Inc. Medical Book Department of Harper & Brothers. New York. 1948. Price \$12.50.

In this latest edition there has been no change in the basic form and content of this exhaustive study of the mechanics of the digestive tract. Since the author's approach is purely physiologic one has a discussion of the basic mechanisms of the digestive tract. Since digestive tract disease revolves itself into a disturbance of basic mechanisms, it is obvious that the information presented is of vital importance to the thoughtful practitioner. Newer concepts discussed in this edition include those relative to nerve supply, technical methods and vagotomy.

C. J. S.

SKIN MANIFESTATIONS OF INTERNAL DISORDERS (DERMADROMES). By Kurt Wiener, M.D., Dermatologist, Mount Sinai Hospital, Deaconess Hospital, Saint Michael's Hospital, Milwaukee, Wisconsin. With 386 Text Illustrations and 6 Color Plates. St. Louis: C. V. Mosby Company. 1947. Price \$12.50.


Someone once made the remark that a dermatician sees only as far as the skin; a dermatologist always looks beyond the skin. So it was only a question of time when someone would correlate all the existing knowledge of the skin and the known and unknown factors which affect it.

Wiener has written a remarkable book on the relationship of dermatologic diseases to internal medicine. He calls the skin part of a syndrome, dermadromes, which include the accompaniments as well as the true skin manifestations of internal disease. In forty-three chapters he has covered practically every disease except syphilis, allergic and nutritional diseases. The work represents a tremendous task of sifting and analyzing the literature. Most of the photographs and color plates are excellent although more pathologic sections should be included in the next edition. This book, so thorough, well written and authentic, should be on the bookshelf of every general practitioner and dermatologist.

N. T.



THE  
W. E. ISLE CO.  
1121 GRAND AVE.  
KANSAS CITY, MO.



**TRUSSES**  
... Accurately fitted to assure complete protection and greatest possible comfort

ENTIRE SECOND FLOOR TELEPHONE VICTOR 2350

**Mullen Ambulance Company**

PRIVATE AMBULANCE  
SERVICE

*Local and Distant Trips  
Day or Night*

5159 Delmar, St. Louis      Forest 1913

**The Neurological Hospital,**  
2625 The Paseo, Kansas City,  
Missouri. Operated by the Rob-  
inson Clinic, for the care and  
treatment of nervous and men-  
tal patients and associated  
conditions.

**FAITH HOSPITAL**

A. J. Signorelli, M.D., *Medical Director*

**2800 N. Taylor      St. Louis, Mo.**  
Goodfellow 6262



One of Four Main Buildings

## GLENWOOD SANATORIUM

A Private Hospital for Care of Nervous and Mental Disorders, Alcohol and Narcotic Addictions.

Thoroughly equipped for all the approved therapeutic measures. Insulin, metrazol and electro shock used in selected cases.

Four main buildings for patients permit ample classification facilities. Large grounds composed of about fifty acres make many out-of-door activities possible.

Phone WEBster 1056

**Visiting Consultant**  
W. W. Graves, M.D.  
**Visiting Neuropsychiatrist**  
Sydney B. Maughs, M.D.

**Medical Superintendent**  
Paul Hines, M.D.  
**Resident Physicians**  
Richard J. Hessberg, M.D.  
LeRoy J. Dierker, M.D.

*For full information, address*

**Paul Hines, M.D., Medical Superintendent, Webster Groves, St. Louis, 19, Mo.**



A complete line of laboratory  
controlled ethical pharmaceuticals.  
*Chemists to the Medical Profession for 44 years.*  
Mo. 3-49      **The Zemmer Company**  
Oakland Station • PITTSBURGH 13, PA.

**RADIUM** (including Radium Applicators) **FOR ALL MEDICAL PURPOSES**  
*Est. 1919*

**QUINCY X-RAY & RADIUM LABORATORIES**

(owned and directed by a Physician-Radiologist)

W. C. U. Bldg.

HAROLD SWANBERG, B.S., M.D., DIRECTOR

Quincy, Illinois

**HAMILTON-SCHMIDT SURGICAL CO.**

*St. Louis, Missouri*

[[ Surgical Instruments, Invalid and Sick Room Supplies ]]  
[[ Post-Operative Belts, Elastic Hosiery and Trusses Fitted ]]

REGISTERED NURSE IN ATTENDANCE

Central 1680

215 N. Tenth St.



**THE WALLACE SANITARIUM**

MEMPHIS, TENNESSEE

*For the Diagnosis and Treatment of Nervous and Mental  
Diseases, Drug Addiction and Alcoholism.*





# Caminoids\*

Trademark

BRAND OF AMINOPEPTODRATE

*For Oral Administration*

## *Has Both...*

### • HIGH BIOLOGICAL VALUE —

Provides full benefit of its complete amino acid content in the management of conditions requiring protein supplementation.

### • HIGH PATIENT-ACCEPTANCE —

Palatability and adaptability to a variety of vehicles (milk, juices, soups, desserts, etc.) encourage continued patient-acceptance of the supplement. New large-size packages afford convenience and economy.

**SUPPLIED:** In bottles containing 6 oz., and in 1-lb., 5-lb., and 10-lb. containers.

**The Caminoids way is the agreeable way**

*Arlington*

\*New designation of Aminoids adopted as a condition of Council-acceptance. The word CAMINOIDS is an exclusive trademark of The Arlington Chemical Company.

**THE ARLINGTON CHEMICAL COMPANY • YONKERS 1, NEW YORK**



## North Shore Health Resort

Winnetka, Illinois

*on the Shores of  
Lake Michigan*

A completely equipped sanitarium for the care of  
*nervous and mental disorders, alcoholism and drug addiction*  
offering all forms of treatment, including electric shock.

**SAMUEL LIEBMAN, M.S., M.D.**

225 Sheridan Road

Medical Director

Phone Winnetka 211

## COMMERCIAL ANNOUNCEMENT

**WANTED:** M. D. trained in Obstetrics and Pediatrics to join new clinic now being organized—central Iowa town of 7,500—new air conditioned ground floor offices. Address Box 163, Missouri State Medical Association, 623 Missouri Bldg., St. Louis 3, Mo.

**FOR SALE:** Large amount of office equipment, x-ray and accessories. Much of it new. Terms. Call or write Dr. C. E. Gilliland, 7270 Natural Bridge Road, St. Louis, Mo. Phone—Mulberry 4848.

**PRACTICE AVAILABLE**—St. Louis. Excellent well established practice in attractive residential area. Small amount of equipment. Splendid opportunity. Leaving City. Act promptly. Address Box 164, Missouri State Medical Association, 623 Missouri Bldg., St. Louis 3, Mo.

**FOR SALE:** Pelton & Crane electric Dental Auto-clave. Perfect chrome finish. Lists new at \$350.00. Will sacrifice for \$150.00. Dan Tucker Miller, M.D., 818 Olive Street, St. Louis, Mo. Phone—Garfield 1444.

**FOR SALE:** Sanborn-Visa Cardiette; Beck-Lee Electro-cardiograph (older model); Tycos Baunanometer; physician's Pandora bag. All property of deceased cardiologist. Address Mrs. J. D. Guyot, 6 Hobbs Terrace, Jefferson City, Mo.

**FOR SALE OR LEASE:** Well established general practice of 40 years, fully equipped modern office. Prosperous community, good hospital facilities nearby. Property of deceased physician. Write Mrs. C. H. Bulkley, LaPlata, Missouri.

**AVAILABLE APRIL 1, 1949:** One accepted Rotating Residency. One accepted Rotating Internship available July 1, 1949. 213 bed Massachusetts Hospital. Definite teaching program with salary and maintenance. Grade A graduate only. Address Box 165, Missouri State Medical Association, 623 Missouri Bldg., St. Louis 3, Mo.

Hair Permanently Removed by Electrolysis

**DOROTHY WORRELL, R.N.**

**233 N. Vandeventer, St. Louis**

**Telephone, Jefferson 9436**

*Work Done on Prescription of Physicians Only*

### THE STOKES SANITARIUM

923 Cherokee Road,  
Louisville, Kentucky  
Our ALCOHOLIC treatment destroys the craving, restores the appetite and sleep, and rebuilds the physical and nervous condition of the patient. Liquors withdrawn gradually; no limit on the amount necessary to prevent or relieve delirium.

MENTAL patients have every comfort that their home affords.

The DRUG treatment is one of gradual Reduction. It relieves the constipation, restores the appetite and sleep; withdrawal pains are absent. No Hyoscine or rapid withdrawal methods used.

NERVOUS patients are accepted by us for observation and diagnosis as well as treatment.

E. W. STOKES, Medical Director, Established 1904  
Telephone—Highland 2101

## INDEX TO ADVERTISERS

Abbott Laboratories .....	193
Aloe, A. S., Company.....	198
American Meat Institute.....	167
Arlington Chemical Co. ....	233
Ayerst, McKenna & Harrison, Ltd. ....	169
Camel Cigarettes .....	171
Camp, S. H., & Co. ....	170
Central Pharmacal Co. ....	215
Coca-Cola Company .....	211
Continental Casualty Co. ....	198
Cook County Graduate School of Medicine.....	228
Cosmo-Cautery Company .....	225
Denver Chemical Mfg. Co., Inc. ....	228
Duncan Laboratories .....	235
Faith Hospital .....	231
Fleet, C. B., Co., Inc. ....	208
Glenwood Sanatorium .....	231
Gradwohl Laboratories .....	173
Hamilton-Schmidt .....	232
Hanger, J. E., Inc. ....	173
Holland-Rantos Co. ....	160
Isle, W. E., Co. ....	231
Lederle Labs. ....	221
Lilly, Eli, & Co. ....	Insert
Lov-e Brassiere Co. ....	223
Luzier's, Inc. ....	168
M & R Dietetic Laboratories, Inc. ....	205
Major Clinic .....	161
Massachusetts Indemnity Insurance Co. ....	227
Mead Johnson & Co. ....	236
Medical Protective Co. ....	173
Merck & Co., Inc. ....	197
Milwaukee Sanitarium .....	211
Mosby, C. V., Co. ....	174
Mullen Ambulance .....	231
National Pathological Labs. ....	228
Norbury Sanatorium .....	166
North Shore Health Resort.....	233
Parke, Davis & Co. ....	158, 159
Philip Morris & Co. ....	165
Physicians Casualty Assn. ....	228
Pogue, Mary E., School.....	227
Producers Creamery Co. ....	219
Quincy X-Ray & Radium Labs. ....	232
Ralph Sanitarium .....	172
Robinson Clinic, Inc. ....	231
Sandoz Chemical Works.....	166
Schering Corporation .....	203
Searle, G. D., & Co. ....	191
Stokes Sanitarium .....	234
U. S. Brewers Foundation, Inc. ....	219
Wallace Sanitarium .....	232
White Laboratories, Inc. ....	Insert
Winthrop-Stearns, Inc. ....	163
Worrell, Dorothy .....	234
Zemmer Company .....	232



*Your* **LABORATORIES**  
*Our* **Responsibility**

**CLINICAL PATHOLOGY  
PATHOLOGIC ANATOMY**

**DUNCAN LABORATORIES**

*Established 1921*


**909 Argyle Building • • Kansas City 6, Mo.**

**230 Frisco Building • • Joplin, Missouri**

**RALPH EMERSON DUNCAN, M. D.**

**MAURICE L. JONES, M.D.**

In addition to diagnostic laboratory services, chemically accurate and clinically tested reagents, solutions, stains and culture media are available for immediate delivery.



This baby's mother learned about Mead's Oleum Percomorphum from her physician, not from public advertising or displays.

*"Servamus Fidem"*

## HOW much sun does the infant really get?

*Not very much:* (1) When the baby is bundled to protect against weather or (2) when shaded to protect against glare or (3) when the sun does not shine for days at a time. Mead's Oleum Percomorphum is a prophylactic against rickets available 365 $\frac{1}{4}$  days in the year, in measurable potency and in controllable dosage. *Use the sun, too.*

Mead Johnson & Co., Evansville, Ind., U.S.A.



# THE JOURNAL

*of the*  
MISSOURI STATE MEDICAL ASSOCIATION

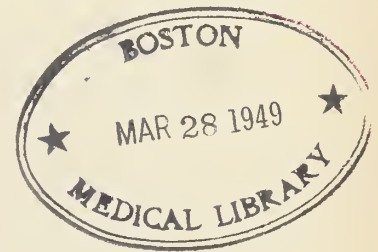
VOLUME 46  
NUMBER 4

APRIL, 1949

SINGLE COPY, 40 CENTS  
PER YEAR, \$3.00

## ORIGINAL ARTICLES

Tumors of the Peripheral Nervous System  
Tumor Seminar



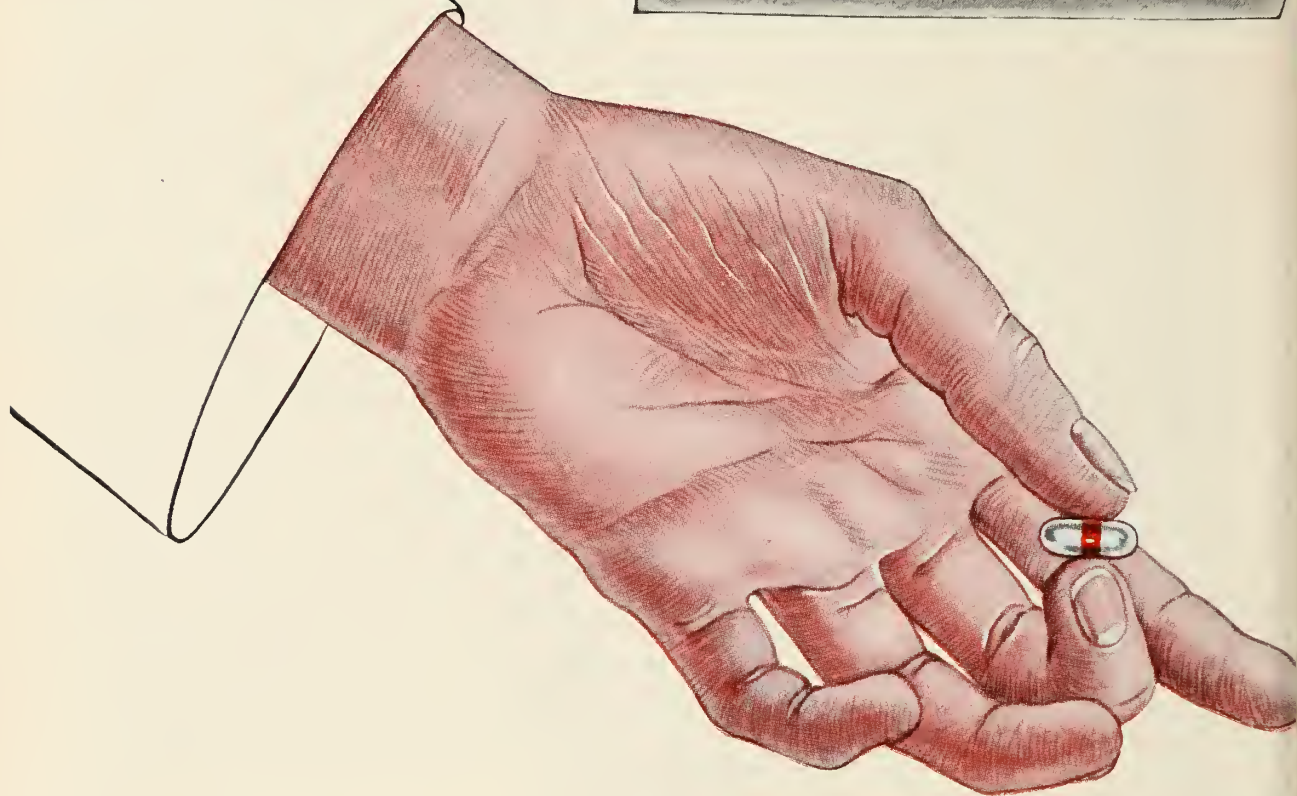
## EDITORIALS

The Committee of 53 Physicians  
Medical Care Costs Compared With Cost of Living Index

(Contents Index Page 241)

*of*

*distinct*



DILANTIN Sodium (diphenylhydantoin sodium, P. D. & Co.) is available in 0.03 Gm. ( $\frac{1}{2}$  gr.) and 0.1 Gm. ( $1\frac{1}{2}$  gr.) Kapseals®, in bottles of 100 and 1000.

\*Magladery, J.: Therapeutic Conference, The Treatment of Epilepsy.  
Bull. Johns Hopkins Hosp., 82:609, (June) 1948.

PARKE, DAVIS & COMPANY



*advantage in epilepsy*

**DILANTIN<sup>®</sup>**

"It has the distinct advantage of being unassociated with mental clouding or drowsiness."\* DILANTIN, highly effective in suppressing grand mal seizures, is notably free from hypnotic side-effects thus facilitating the educational, vocational and social rehabilitation of the epileptic patient.

Absence or great diminution in frequency and severity of attacks is achieved with individualized dosage schedules.

DETROIT 32, MICHIGAN



## In Chronic Cholecystitis...



**First** chemically pure bile acid derivative made available for therapy, Council-Accepted since 1932, exhaustively studied and most favorably reported by hundreds of investigators, Decholin® remains today a **Foremost** bile acid preparation for use in the medical management of chronic cholecystitis.

## The Most Potent Hydrocholeretic,

*Decholin multiplies* and frees the flow of thinned liver bile. By thus easing biliary evacuation and closely simulating a physiologic drainage of accumulated foreign matter through the hepatic and common ducts, Decholin may lessen the epigastric and right upper quadrant discomfort typical of chronic cholecystitis, improve the patient's tolerance for food and reduce the periods of disability.

# Decholin

*dehydrocholic acid*



3¾ gr. tablets in bottles of 25, 100, 500, and 1000.

Decholin Sodium® (sodium dehydrocholate) in 20% aqueous solution; ampuls of 3 cc., 5 cc. and 10 cc., packages of 3 and 20 ampuls.

The Fifth Edition of "Decholin in Biliary Tract Disturbances" is now available upon request.



**AMES COMPANY, INC.**  
ELKHART, INDIANA



## CONTENTS

Tumors of the Peripheral Nervous System. Arthur Purdy Stout, M.D., New York.....	255	Myxoma of Zygomatic Bone .....	279
Tumor Seminar. Arthur Purdy Stout, M.D., New York, N. Y.—		Undiagnosed Condition of Lung and Sacrum (Osteogenic Sarcoma ?, or Metastasizing Giant Cell Tumor?) .....	282
Multiple Squamous Cell Epitheliomas of the Scalp Arising From Hair Follicles (?) or Sebaceous Cysts (?) .....	259	Papillary Carcinoma of the Thyroid.....	286
Papillary Squamous Cell Epithelioma of Gum of Mandible .....	262	Carcinoma (Adenoma Malignum Type) of Humerus, Metastatic From the Thyroid.....	290
Papillary Carcinoma of Nasal Cavity .....	263	President's Page .....	292
Malignant Melanoma of the Anal Canal.....	265	Editorials—	
Carcinoma of the Rectum (Metastatic?).....	266	The Committee of 53 Physicians .....	293
Granuloma of the Lung.....	268	Medical Care Costs Compared With Cost of Living Index .....	293
Plexiform Neurofibroma of Back.....	269	News Notes .....	294
Thymoma in a Case of Myasthenia Gravis.....	270	Musings of the Field Secretary.....	296
Fibrosarcoma of Cicatrix of Thoracic Wall.....	272	Organization Activities .....	297
Kaposi Disease .....	273	Deaths .....	297
Plasmocytoma of Inframammary Region.....	275	Miscellany .....	297
Lymphosarcoma, Lymphocytic Cell Type of the Temporal Region .....	277	Book Reviews .....	302
		Commercial Announcements .....	314

Entered as Second Class Matter, February 18, 1925, at the Post Office at Fulton, Mo., under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1003, Act of October 3, 1917, authorized July 30, 1918. Business Office, 1201 5 Bluff St., Fulton, Mo., and 623 Missouri Building, St. Louis, Mo., Editorial Office, 623 Missouri Building, St. Louis, Mo. Return postage guaranteed. Printed by The Ovid Bell Press, Inc., Fulton, Mo.

# THE MAJOR CLINIC ASSOCIATION

3100 Euclid Avenue, Kansas City, Missouri

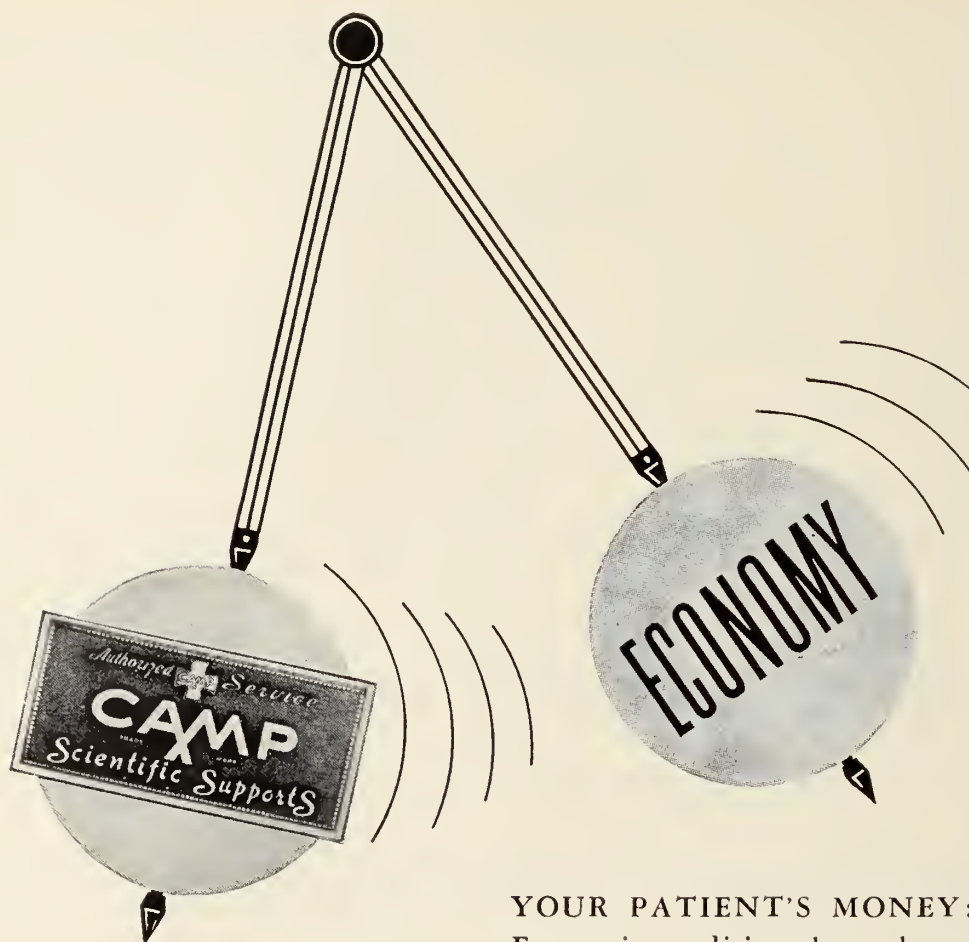
A Well  
Equipped  
Institution  
for the  
Treatment of  
Nervous and  
Mental  
Diseases and  
Alcohol  
Drug and  
Tobacco  
Addictions



Beautiful  
Location  
Large, Well  
Shaded  
Grounds,  
Spacious  
Porches,  
All Modern  
Methods for  
Restoring  
Patients to a  
Normal  
Condition

HERMON S. MAJOR, M.D.  
Medical Director

HERMON S. MAJOR, JR.  
Business Manager



THIS EMBLEM is displayed by reliable merchants in your community. Camp Scientific Supports are never sold by door-to-door canvassers. Prices are based on intrinsic value. Regular technical and ethical training of CAMP fitters insures precise and conscientious attention to your recommendations.

CAMP SCIENTIFIC SUPPORTS are prescribed and recommended in many types for prenatal, postnatal, post-operative, pendulous abdomen, visceroptosis, nephroptosis, hernia, orthopedic and other conditions. If you do not have a copy of the Camp "Reference Book for Physicians and Surgeons," it will be sent upon request.

#### YOUR PATIENT'S MONEY:

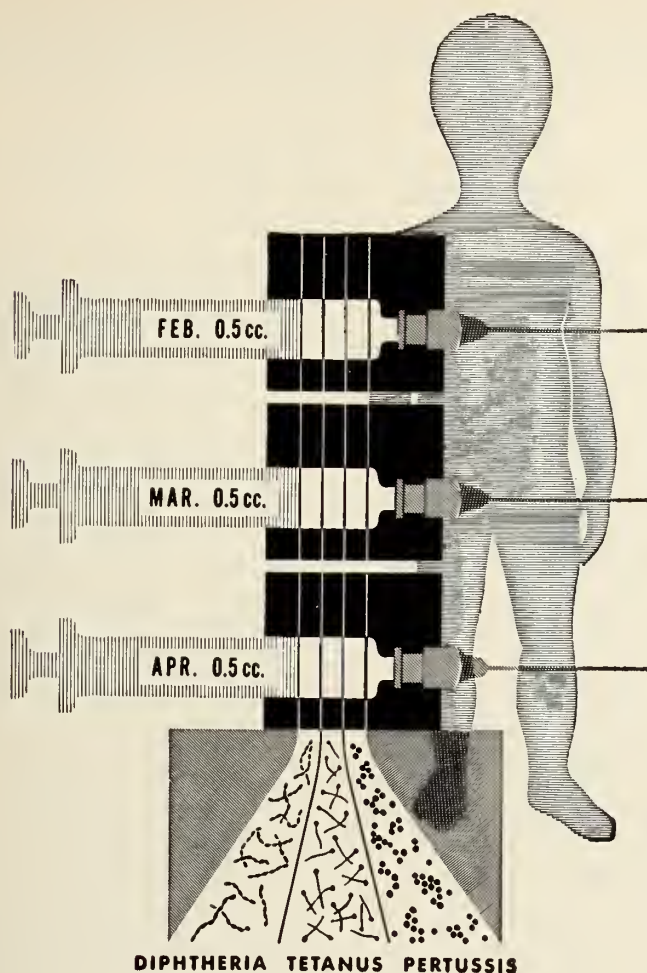
Economic conditions have shown many swings during the four decades of CAMP history. But Camp prices have always been conscientiously based on intrinsic value. These moderate prices coupled with the functional efficiency and superb quality of Camp Scientific Supports, long recognized by the profession, mean true economy to the patient.

**S. H. CAMP and COMPANY, JACKSON, MICHIGAN**

*World's Largest Manufacturers of Scientific Supports*

Offices in New York • Chicago • Windsor, Ontario • London, England





## SIMPLIFIED simultaneous immunization

"... a decrease in the number of injections will go far to make the practice of pediatrics more tolerable." (Fischer: J. A. M. A. 134:1064, 1947)

Office routine simplified . . . each injection is the same—0.5 cc.

Patient discomfort and reactions minimized

Lower expense for physicians and institutions

Easier injection because the product is exceptionally fluid

*1.5 cc. vials — 1 complete immunization; 7.5 cc. vials — 5 complete immunizations.*

**DIPHTHERIA**  
and  
**TETANUS TOXOIDS**  
Alum Precipitated and  
**PERTUSSIS VACCINE**  
**COMBINED SQUIBB**

# County Societies in Affiliation with the Missouri State Medical Association

COUNTY	DISTRICT	PRESIDENT	ADDRESS	SECRETARY	ADDRESS
Andrew	1	V. R. Wilson	Rosendale	M. L. Holliday	Fillmore
Audrain	5	Glen P. Kallenbach	Mexico	Fred Griffin	Mexico
Barton Dade	8	Rudolf Knapp	Golden City	Vern T. Bickel	Lamar
Bates	6			John M. Cooper	Butler
Benton	6	T. S. Reser	Cole Camp	James A. Logan	Warsaw
Boone	5	James Baker	Columbia	Helen Yeager	Columbia
Buchanan	1	O. Earl Whitsell	St. Joseph	Joseph L. Fisher	St. Joseph
Butler	10	Frank E. Dinelli	Poplar Bluff	J. W. McPheeters, Jr.	Poplar Bluff
Caldwell-Livingston	1	Virgil D. Vandiver	Chillicothe	Charles M. Grace	Chillicothe
Callaway	5	R. B. Price	Fulton	R. N. Crews	Fulton
Camden	5	E. G. Claiborne	Camdenton	G. T. Myers	Macks Creek
Cape Girardeau	10	W. F. Oehler	Cape Girardeau	Charles F. Wilson	Cape Girardeau
Carroll	1	W. G. Atwood	Carrollton	John H. Platz	Carrollton
Carter-Shannon	9			W. T. Eudy	Eminence
Cass	6	Herbert A. Tracy	Belton	O. B. Barger	Harrisonville
Chariton-Macon-Monroe					
Randolph	2	D. E. Eggleston	Macon	Henry K. Baker	Moberly
Clay	1	W. H. Goodson	Liberty	S. R. McCracken	Excelsior Springs
Clinton	1	Ronald E. Wilbur	Cameron	F. A. Santner	Lathrop
Cole	5	H. M. Wiley	Jefferson City	J. Paul Leslie	Jefferson City
Cooper	5			J. C. Tinch	Boonville
Dallas-Hickory-Polk	8	C. H. Barnett	Bolivar	John R. O'Brien	Bolivar
De Kalb	1			W. S. Gale	Osborn
Dunklin	10	Quinton Tarver	Kennett	E. L. Spence	Kennett
Franklin	4	Herbert H. Schmidt	Marthasville	F. G. Mays	Washington
Greene	8	Daniel L. Yancey	Springfield	Kenneth E. Knabb	Springfield
Grundy-Daviess	1	Joseph M. Quisito	Trenton	E. A. Duffy	Trenton
Harrison	1	Merriam Gearhart	Bethany	W. A. Broyles	Bethany
Henry	6	S. B. Hughes	Clinton	R. S. Hollingsworth	Clinton
Holt	1	F. E. Hogan	Mound City	D. C. Perry	Mound City
Howard	5	Morris Leech	Fayette	Francis D. Dean	Fayette
Jackson	7	A. N. Altringer	Kansas City	Kenneth E. Cox	Kansas City
Jasper	8	Otto T. Blanke	Joplin	E. H. Hamilton	Joplin
Jefferson	4	Robert H. Donnell	Crystal City	George Hopson	DeSoto
Johnson	6	O. H. Damron	Warrensburg	Reed T. Maxson	Warrensburg
Laclede	9	H. W. Carrington	Lebanon	B. B. Hurst	Lebanon
Lafayette	6	Douglas Kelling	Waverly	Jordan Kelling	Waverly
Lewis-Clark-Scotland	2	J. R. Bridges	Kahoka	P. W. Jennings	Canton
Lincoln	4	H. S. Harris	Troy	J. C. Creech	Troy
Linn	2	Roy R. Haley	Brookfield	J. R. Dixon	Brookfield
Marion-Ralls	2	H. L. Greene	Hannibal	M. J. Roller	Hannibal
Mercer	1	T. S. Duff	Cainsville	J. M. Perry	Princeton
Miller	5	G. D. Walker	Eldon	Carl T. Buehler, Jr.	Eldon
Mississippi	10	G. W. Whitaker	East Prairie	E. C. Rolwing	Charleston
Moniteau	5	K. S. Latham	California	L. L. Latham	California
Montgomery	5	E. J. T. Anderson	Montgomery City	S. J. Byland	Wellsville
Morgan	5	A. A. Gunn	Versailles	J. L. Washburn	Versailles
New Madrid	10	L. J. Smith	New Madrid	H. W. Carter	Portageville
Newton	8	H. C. Lentz	Neosho	J. A. Guthrie	Neosho
Nodaway-Atchison					
Gentry-Worth	1	Emmett B. Settle	Rock Port	Charles D. Humberd	Barnard
North Central Counties					
Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam)	2	Spencer L. Freeman	Kirksville	John B. Jones	Kirksville
Ozarks Medical Society (Barry-Lawrence-Stone-Christian-Taney)	8	Fred Wommack	Crane	Kenneth Glover	Mt. Vernon
Pemiscot	10	E. L. Taylor	Steele	C. F. Cain	Caruthersville
Perry	10	J. J. Bredall	Perryville	L. W. Feltz	Perryville
Pettis	6	E. L. Rhodes	Sedalia	Carl D. Siegel	Sedalia
Phelps-Crawford-Dent					
Pulaski	9	A. A. Drake	Rolla	M. K. Underwood	Rolla
Pike	2	Eugene Barrymore	Bowling Green	Charles H. Lewellen	Louisiana
Platte	1	L. C. Calvert	Weston	E. K. Langford	Platte City
Ray	1	L. D. Greene	Richmond		
St. Charles	4	J. M. Jenkins	St. Charles	Calvin Clay	St. Charles
St. Francois-Iron-Madison					
Washington-Reynolds	10	George L. Watkins	Farmington	Marvin T. Haw, Jr.	Bonne Terre
Ste. Genevieve	10	A. E. Sexauer	Ste. Genevieve	R. W. Lanning	Ste. Genevieve
St. Louis City	3	J. W. Thompson	St. Louis	S. J. Merenda	St. Louis
St. Louis	4	Paul R. Whitener	St. Louis	Robert C. Kingsland	St. Louis
Saline	6	James A. Reid	Marshall	Charles A. Veatch	Marshall
Scott	10	W. C. Critchlow	Sikeston	W. J. Ferguson	Sikeston
Shelby	2	D. L. Harlan	Clarence		
South Central Counties					
Medical Societies (Howell-Oregon-Texas-Wright-Douglas)	9	Garrett S. Hogg, Jr.	Cabool	A. C. Ames	Mountain Grove
Stoddard	10	H. A. Harris	Bloomfield	W. C. Dieckman	Dexter
Vernon-Cedar	6	William H. Allen	Nevada	Rolla B. Wray	Nevada
Webster	8	C. R. Macdonnell	Marshfield	E. G. Beers	Seymour



# *How mild can a cigarette be?*



**I**n a recent coast-to-coast test, hundreds of men and women smoked Camels—and only Camels—for 30 consecutive days. These people smoked on the average of one to two packs a day. Each week, during the entire test period, throat specialists examined these Camel smokers. A total of 2470 careful examinations were made. The doctors who made the throat examinations of these Camel smokers reported:

**“NOT ONE  
SINGLE CASE OF  
THROAT IRRITATION  
due to smoking  
CAMELS!”**

*According to a  
Nationwide survey:*

**MORE DOCTORS  
SMOKE CAMELS**  
*than any other cigarette*

Doctors smoke for pleasure, too! And when three leading independent research organizations asked 113,597 doctors what cigarette they smoked, the brand named most was Camel!

*Money-Back  
Guarantee!*

Smoke Camels and test them in your own “T-Zone”—T for taste, T for throat. If, at any time, you are not convinced that Camels are the mildest cigarette you have ever smoked, return the package with the unused Camels and we will refund its full purchase price, plus postage. (Signed) R. J. Reynolds Tobacco Company, Winston-Salem, North Carolina.

# Theocalcin

*Council Accepted*

## In Congestive Heart Failure

For the reduction of edema, to diminish dyspnoea and to strengthen heart action, prescribe Theocalcin, beginning with 2 or 3 tablets t. i. d., with meals. After relief is obtained, the comfort of the patient may be continued with smaller doses. Well tolerated.

Theocalcin, brand of theobromine-calcium salicylate,  
Trade Mark reg. U. S. Pat. Off.

Available in  $7\frac{1}{2}$  grain tablets and in powder form.

**Bilhuber-Knoll Corp. Orange, N. J.**

## The Norbury Sanatorium

Established 1901—Incorporated—  
Licensed—Jacksonville, Illinois

• ALBERT H. DOLLEAR, B.S., M.D., Superintendent. FRANK GARM NORBURY, A.M., M.D., Medical Director. SAMUEL N. CLARK, M.D., Physician. HENRY A. DOLLEAR, M.D., Physician.



### *Maplecrest*

- Pictured above — Restful, congenial home-like surroundings are combined with the most modern diagnostic and therapeutic equipment.

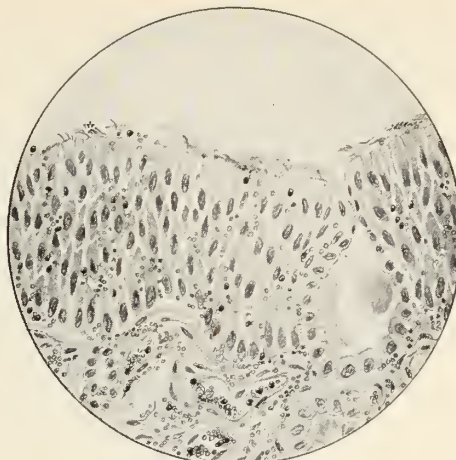
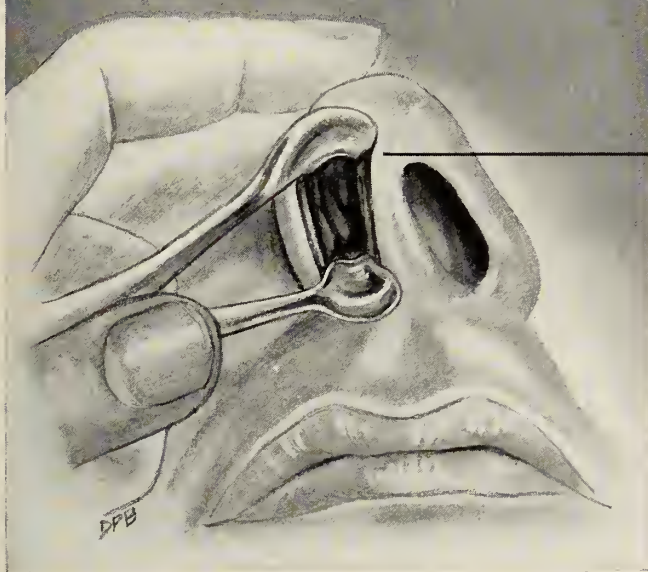


### *Maplewood*

- Pictured at left — Most comfortable homes for individuals requiring rest, scientific diagnosis and treatment. Fireproof construction.



**promotes  
aeration . . . free drainage  
in colds  
. . . sinusitis**



Nasal membrane showing increased leukocytes with denudation of cilia.

Normal appearing nasal epithelium.



Nasal engorgement and hypersecretion accompanying the common cold and sinusitis are quickly relieved by the vasoconstrictive action of

## **NEO-SYNEPHRINE®**

HYDROCHLORIDE

Brand of Phenylephrine Hydrochloride

The decongestive action of several drops in each nostril usually extends over two to four hours. The effect is undiminished after repeated use.

Relatively nonirritating . . . Virtually no central stimulation.

Supplied in ¼% solution (plain and aromatic), 1 oz. bottles. Also 1% solution (when greater concentration is required), 1 oz. bottles, and ½% water soluble jelly, ⅝ oz. tubes.

*Winthrop-Stearns* INC.  
NEW YORK 13, N. Y. WINDSOR, ONT.



Neo-Synephrine, trademark reg. U. S. & Canada

*an aid in treatment of specific breast conditions*

# *Lov-e'* CORRECTIVE BRASSIERES

*are custom-fitted to prescription...*



Proper physiological support for the breast is a medical problem, and patients are grateful to the physician who recognizes this fact. Lov-e's extensive therapeutic line of breast supports provides remedial support for specific breast conditions. From more than 500 bust-cup-torso size variations, the patient's correct size is selected, then fitted to her *individual measurements* by specially trained Lov-e' technicians, according to your exact instructions.

*Lov-e' Brassieres are available in a wide variety of all fine fabrics including cottons, rayon jacquards and nylons. Also available: sleeping brassieres, hospital binders, artificial breasts; muscle pads and maternity garter supports.*

LOV-E SECTION  
CORSET DEPARTMENT  
FAMOUS-BARR CO., ST. LOUIS

## MATERNITY

— for pre-natal and post-natal. Helps prevent leakage. Adjusted without charge during pregnancy.



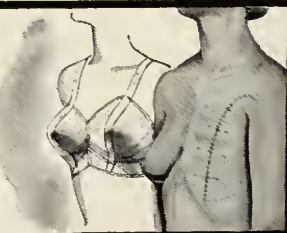
## HYPERTROPHIC

— inner pocket for pendulous bust. Built up back. Padded shoulder straps. Redistributes bust weight.



## MASTECTOMY

— fitted with Lov-e' bust pads to restore bust contour. Aids psychologically.







-----IN THE MEDICAL MANAGEMENT OF PEPTIC ULCER-----

## POUR DIRT AWAY with **Rexair**

Wouldn't you like to get rid of dusty vacuum bags forever? Wouldn't you like to pour dust away as easily as dirty dishwater?

You can, with Rexair—the amazing new home appliance that washes your dust away. Rexair collects dust in water; you just pour the water down the drain and flush—dust and dirt go with it.

When you clean with Rexair, you clean *clean*. Rexair has no porous bag through which dust can escape back into the air you breathe. Instead, the air passes through a churning bath of water which wets down the dust and returns only dust-free air to the room. Wet dust cannot fly, and dust cannot escape from Rexair's water basin.

Rexair washes the air in your home, humidifies, vaporizes medicaments, even scrubs floors. See the Rexair before you buy a humidifier, a vaporizer, or even a vacuum cleaner. Over 1,000,000 in use.



**FREE BOOK:** Send for this free, illustrated 12-page book. Shows how Rexair even cleans the air you breathe. **REXAIR DIVISION, MARTIN-PARRY CORP.** Box 964, Toledo 1, Ohio, Dept.



# Rexair



## North Shore Health Resort

Winnetka, Illinois

*on the Shores of  
Lake Michigan*

A completely equipped sanitarium for the care of  
*nervous and mental disorders, alcoholism and drug addiction*  
offering all forms of treatment, including electric shock.

**SAMUEL LIEBMAN, M.S., M.D.**

225 Sheridan Road

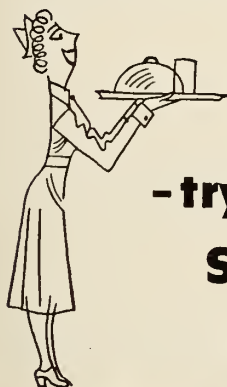
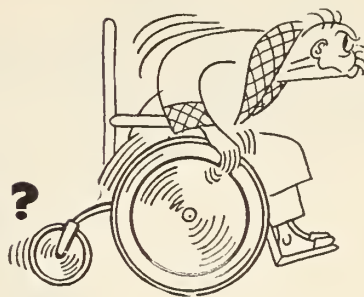
*Medical Director*

Phone Winnetka 211

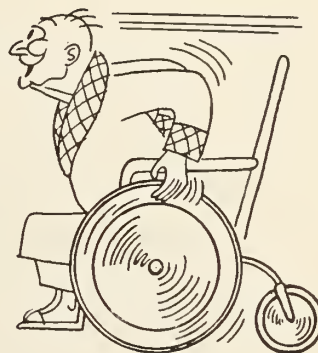




**Sick folks sick  
of soft diets?**



**-try tempting  
Swift's Strained Meats!**



**6 varieties:**

Beef, lamb, pork,  
veal, liver, heart

The foods soft-diet patients have to eat! No wonder they succumb to appetite-apathy.

But many physicians today have discovered there is a way to put appetizing, real meat goodness into soft diets. They recommend Swift's Strained Meats. These specially prepared meats retain all their palatability, and a maximum of nutrient value in a form that's highly digestible—easy to eat. To vary patients' menus, Swift's Strained Meats offer six different

varieties. Convenient—ready to serve.

Nutritionally, Swift's Strained Meats provide an excellent base for a high-protein, low-residue diet. A rich source of complete, high-quality proteins, they make available simultaneously all known essential amino acids—for optimum protein synthesis. In addition, Swift's Strained Meats supply hemopoietic iron and goodly amounts of B vitamins. Let Swift's Strained Meats help overcome anorexia in your soft-diet patients!

*The makers of Swift's Strained Meats invite you to send for the new physicians' handbook of protein feeding, written by a doctor, "The Importance of Protein Foods in Health and Disease." Send to:*

**SWIFT & COMPANY**

Chicago 9, Illinois



*All nutritional statements made in this advertisement are accepted by the Council on Foods and Nutrition of the American Medical Association.*



For patients who can take foods of less fine consistency—Swift's Diced Meats offer tender morsels of nutritious meats with tempting flavors patients appreciate.

# 50 and 2

## YEARS TREATING ALCOHOL AND DRUG ADDICTION

In 1897 Doctor B. B. Ralph developed methods of treating alcohol and narcotic addiction that, by the standards of the time, were conspicuous for success.

Twenty-five years ago experience had bettered the methods. Today with the advantages of collateral medicine, treatment is markedly further improved.

The Ralph Sanitarium provides personalized care in a quiet, homelike atmosphere. Dietetics, hydrotherapy and massage speed physical and emotional re-education. Co-operation with referring physicians. Write or phone.

*The*  
**RALPH**  
**SANITARIUM**  
*Established 1897*

Ralph Emerson Duncan, M.D.  
DIRECTOR



**529 HIGHLAND AVENUE • KANSAS CITY 6, MISSOURI**

Telephone Vltor 3624





# Widely Used..

## BECAUSE WIDELY APPLICABLE

Ovaltine in milk, a multiple dietary supplement, is eminently useful in preventing malnutrition referable to nutritionally incomplete diets or to restricted food intake. This flavorsome food drink is widely applicable in dietotherapy of illness and convalescence, and for correcting inadequate nutrient intake in persons of all ages.

1. The protein of this delicious food drink—Ovaltine in milk—is of high biologic value, supplies all the indispensable amino acids required for tissue maintenance and growth and other physiologic needs.

2. Its contained vitamins and min-

erals provide excellent amounts of vitamins A and D, ascorbic acid, niacin, riboflavin, thiamine, calcium, copper, iron, and phosphorus.

3. Its carbohydrate energy is promptly available for utilization.

4. Its easy digestibility makes for ready absorption of its valuable nutrients.

5. Its delicious flavor, appealing alike to children, adults, and the aged, makes it acceptable even when other foods may be refused.

6. Its multiple nutrients, in kind and amount, make Ovaltine in milk a highly efficient dietary supplement.

THE WANDER COMPANY, 360 N. MICHIGAN AVE., CHICAGO 1, ILL.



# Ovaltine

Three servings daily of Ovaltine, each made of ½ oz. of Ovaltine and 8 oz. of whole milk,\* provide:

CALORIES . . . . .	676	VITAMIN A . . . . .	3000 I.U.
PROTEIN . . . . .	32 Gm.	VITAMIN B <sub>1</sub> . . . . .	1.16 mg.
FAT . . . . .	32 Gm.	RIBOFLAVIN . . . . .	2.0 mg.
CARBOHYDRATE . . . . .	65 Gm.	NIACIN . . . . .	6.8 mg.
CALCIUM . . . . .	1.12 Gm.	VITAMIN C . . . . .	30.0 mg.
PHOSPHORUS . . . . .	0.94 Gm.	VITAMIN D . . . . .	417 I.U.
IRON . . . . .	12 mg.	COPPER . . . . .	0.5 mg.

\*Based on average reported values for milk.



A complete line for clinical laboratories devoted to all branches of chemistry, bacteriology, hematology, and parasitology. Tested and checked in our own clinical laboratories. Purity warranted. Our facilities assure prompt shipment of large or small orders. Inquiries invited.

## COMPLETE CATALOG

Reagents catalogued alphabetically—also according to subjects and techniques, plus medical reference guide. Catalog comprises full line blood testing sera including anti-Rh, anti-M and anti-N; also reagents for Wassermann, Kline, and Kalin tests. Write for your copy. FREE ON REQUEST.

and Medical  
Reference  
Guide



# GRADWOHL

LABORATORIES

R. B. H. Gradwohl, M. D., Director  
3514 Lucas Av. St. Louis, Mo.



The Emblem of  
Artificial  
Limb  
Superiority  
for

## Over 85 years

Since the first Hanger Limb was manufactured in 1861, Hanger Artificial Legs and Arms have given satisfaction to thousands of wearers. These people, once partially or completely incapacitated, have been able to return to work and play and to take part in the everyday activities of life. To many thousands, the Hanger seal is a symbol of help and hope. To them, and to all, the Hanger name is a guarantee of Comfort, Correct Fit, and Fine Performance.

# HANGER

 ARTIFICIAL LIMBS

1912-14 Olive Street  
St. Louis 3, Missouri

# for Fifty Years

## PROFESSIONAL PROTECTION EXCLUSIVELY

THE  
**MEDICAL PROTECTIVE COMPANY**  
FORT WAYNE, INDIANA

ST. LOUIS Office: A. W. Breckenkamp, Representative, 623 Missouri Theatre Building, Telephone Newstead 0404



# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies  
Issued Monthly under direction of the Publication Committee

COPYRIGHTED, 1949, BY MISSOURI STATE MEDICAL ASSOCIATION. ALL RIGHTS RESERVED.

VOLUME 46

APRIL, 1949

NUMBER 4

G. V. STRYKER, M.D., Editor  
HELEN PENN, Assistant Editor  
623 Missouri Bldg., St. Louis, Mo. Telephone, Newstead 0404-05

PUBLICATION COMMITTEE	{	G. V. STRYKER, M.D., Chairman
		V. T. WILLIAMS, M.D.
		H. E. PETERSEN, M.D.
		FRED R. FARTHING, M.D.

### TUMORS OF THE PERIPHERAL NERVOUS SYSTEM

ARTHUR PURDY STOUT, M.D., *New York*

THE TUMORS of the peripheral nervous system form a group about which there has arisen much confusion and misunderstanding. There are several reasons for this. In the first place, they are not concentrated in one specialized region as is the case with the tumors of the central nervous system where they can receive the expert study of neuropathologists but are scattered at large throughout the body where they are intermingled with many other varieties of tissues and tumors and come to the attention of the general pathologist who is usually not so familiar with the behavior of neural cells. In the second place, there has raged for many years a conflict concerning the cellular composition of the nerve sheath tumors which has given rise to many confusing names and hypotheses. Again the versatility of the nerve sheath cells which permits them to form tissues such as bone, cartilage, fibrous connective tissue, striated muscle and the like provides a potent source of confusion for the unwary oncologist when he encounters manifestations of this metaplastic activity in tumors. Finally, the infrequency of the different tumors has made it difficult for any one individual personally to observe all of the different disguises in which the tumors may present themselves and thus obtain a synoptical survey of the entire group.

In order to understand these tumors it is necessary to appreciate that, like the tumors of the central nervous system, those which develop from the peripheral nervous system are largely derived from neurectoderm and not from mesoderm no matter how they may disguise themselves. There is ample evidence from many sources that neurectodermal cells can produce tissues which more commonly are derived from mesoderm. There are the basic embryologic studies of Landacre (1921), and of Stone (1929) to substantiate this; the tissue culture ob-

servations of Murray (1942) to show that Schwannian syncytium can make reticulin, and the histopathologic reports of Masson (1926, 1932, 1938), Worster-Drought, Carnegie-Dixon and McMenemy (1935), Groth (1934), and Wilson (1941), which make it clear that neurectodermal cells in von Recklinghausen's disease and in tumors can form bone, cartilage, fat, melanoblasts, striated muscle and, perhaps, even kidney blastoma as well as connective tissue. On the other side of the picture there does not exist any evidence at all that normal or neoplastic cells of mesodermal origin are capable of forming Schwannian cells or any of the other purely neurogenous tissues.

That bizarre disturbance of the central and peripheral nervous system known as von Recklinghausen's disease has afforded much fruitful material for the understanding of the extraordinary metaplastic activities of the neurectodermal cells for they take place within affected nerves where their relationship with Schwannian cells can be easily observed. But this disease has also provided sources of confusion because of the fact that in some way it may have associated with it tumors such as sebaceous adenoma and pure fibroma molluscum which are not in any way composed of cells derived from neurectoderm. Finally, there are also tumors which are very richly innervated such as the glomus tumor (Murray and Stout, 1942) and the skin leiomyoma (Stout, 1937) but whose principal tissues are not, so far as is known, derived from neurectoderm.

In some ways the tumors of the peripheral nervous system are more difficult to understand than those of its central portion because the peripheral tumors, while ultimately all derived from undifferentiated neurectoderm, partake sometimes of the characteristics of its different derivatives. There

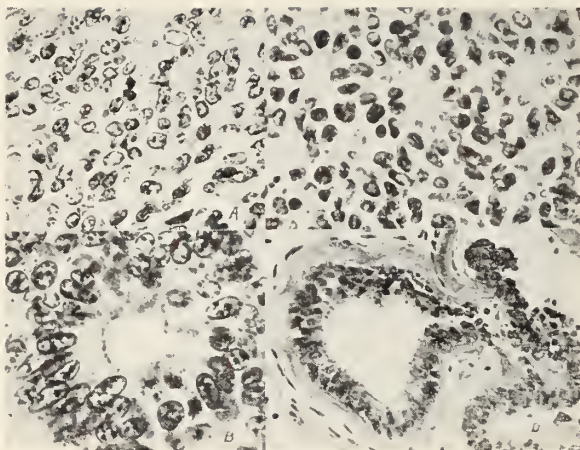


Fig. 1. Compound photomicrograph showing, upper left, undifferentiated neuroepithelioma of radial nerve (Stout and Murray, 1942); lower left, neuroepithelioma with rosettes of ulnar nerve (Stout, 1918); upper right, medulloblastoma of sciatic nerve with pseudorosettes; lower right, medulloepithelioma of median nerve (Lanford and Cohn, 1927; Cohn, 1928; Penfield, 1932; Stout, 1935).

are, for example, in addition to the Schwannian elements and their metaplastic variants, tumors which on the one hand reproduce the various stages in development of the sympathetic system and on the other hand the rare tumors of the ordinary nerves which reproduce the embryonal appearance of the ganglionic cells of central nervous system. Since the terms used for these tumors differ from those employed for the sympathetic series, it is necessary to use an inordinate number of names to label a relatively small number of tumors. Finally, there is still another group which must be included, namely, the tumors composed of paraganglionic cells which may or may not be functionally active.

Table I. *Tumors of the Peripheral Nervous System*

A. Tumors of Peripheral Nerves	
Non-neoplastic Neurectodermal	
Traumatic and Amputation Neuroma	
Spontaneous Neuroma	
Neurectodermal Neoplasms.	
Ganglionic Cell Tumors.	
Ganglioneuroma	
Neuroepithelioma	
(a) Undifferentiated	
(b) With rosettes	
Medulloblastoma	
Medulloepithelioma	
Supportive Tissue Tumors.	
Neurofibroma	
(a) Simple	
(b) With metaplasia	
Neurilemoma	
Malignant Schwannoma	
(a) Simple	
(b) With metaplasia	
Pigmented mole	
Malignant melanoma	
Tumors Composed of Multiple Tissues of Which Nerves Form Part.	
Glomus tumor	
Leiomyoma (cutaneous)	
Tumors and Lesions Associated with von Recklinghausen's Disease.	
Fibroma molluscum	
Multiple adenoma sebaceum	
Lipoma	
Elephantiac hypertrophy of bone, intestine, appendix, etc.	
Mesodermal Tumors.	
Hemangioma	(Neuroxanthoma?)
(Lipoma?)	(Fibroma?)
(Ganglion?)	(Neurogenic sarcoma?)
Secondary Neoplasms.	
Direct invasion of neural lymphatics	
Intraneural metastasis	
Tumors of ganglia lying within nerves	

## B. Tumors of Sympathetic Ganglia

- Ganglioneuroma.
  - (a) Differentiated
  - (b) Partly differentiated
- Sympathicoblastoma (Neuroblastoma).
  - (a) Undifferentiated
  - (b) Pseudorosettes

## C. Tumors of Paraganglionic Cells

- Phaeochromocytoma (hormonally active).
- Paraganglioma (hormonally inactive).

Table I is an attempt to survey the entire field of tumors of the peripheral nervous system from the point of view of a neurectodermal origin of the vast majority of these tumors using terms which reflect this hypothesis. In this paper it is not my intention to present an exhaustive monograph describing in detail each tumor type but merely to indicate briefly the bases upon which rest the interpretation of the various controversial terms.

*Non-neoplastic Neurectodermal Tumors.*—These include, among the more familiar types, the appendiceal neuromas of Masson (1932) which he has now demonstrated in the gallbladder and other parts of the gastrointestinal tract (1946). It is only necessary to remark that the vigorous Schwannian cells are the all important elements in all of these growths as demonstrated by Masson (1942).

*Ganglionic Cell Tumors of Peripheral Nerves.*—These exceedingly rare tumors are important because they represent proof that ganglionic tumors not connected with the sympathetic nervous system can develop in peripheral nerves and reproduce the appearance of central nervous system ganglionic tumors. Differentiated ganglionic cell growths in the peripheral nerves are extremely uncommon but have been described by Westphalen (1888), Lhermitte and Dumas (1920) and Stout (1946). The malignant tumors corresponding with central forms are represented by a completely undifferentiated neuroepithelioma of the radial nerve confirmed by tissue culture studies (Murray and Stout, 1942) (fig. 1A); a rosette forming tumor of the ulnar nerve (Stout 1918, 1935) (fig. 1B); a medulloblastoma primary in the sciatic nerve which reproduced the appearance of a sympathicoblastoma with pseudorosettes but obviously could not be so classified since it did not develop in connection with the sympathetic nervous system (Stout, unpublished) (fig. 1C), and the medulloepithelioma, a tumor in which epithelial structures reminiscent of the medullary tube are formed. Examples of this have been reported by Garré (1892), by Hackel (1934), and a case in the median nerve has been reported by Lanford and Cohn (1927) and by Cohn (1928), and later studied by Penfield (1932) and Stout (1935) (fig. 1D). The ganglioneuromas are benign tumors. The neuroepithelioma and medulloblastoma are fully malignant tumors which metastasize freely and kill. The medulloepithelioma is a tumor of restricted malignancy; it infiltrates and recurs but apparently does not metastasize.

*The Supportive Tissue Tumors.*—The neurofibroma and neurilemoma are benign growths which the investigations of Masson (1942) supplemented by the tissue culture studies of Murray, Stout and Bradley (1940, 1942) have firmly established as



Schwannian neoplasms in spite of the hesitations of Foot (1940) and Bailey and Herrmann (1938) and the dissent of Penfield (1932) and Tarlov (1940). It is in the neurofibromas that the extraordinary metaplastic versatility of the Schwannian cells has been best demonstrated. They have been shown to produce striated muscle cells (Masson 1932) (Masson and Martin 1936), naevus cells (Masson 1926), tactile corpuscles (Masson 1932, Worster-Drought, Carnegie-Dixon and McMenemy 1935), bone and cartilage (Groth, 1934, Wilson 1941) and fat (Groth 1934). After an extended study I have come to the conclusion that the number of malignant Schwannomas which can be proved such is relatively small. Formerly (1935) I felt that these malignant spindle cell tumors probably were derived from the mesoblastic elements of the nerve sheath, but when I learned that the Schwann cell could form reticulin (Murray and Stout, 1942), and observed a malignant tumor produce Schwann cells in vitro, and found that these tumors had distinctive features which differentiated them from fibrosarcomas (fig. 2 A and B), I changed my mind and am now convinced that they are all malignant Schwannomas. I also have had an opportunity to study a malignant Schwannoma of the cervical nerves which showed cartilaginous and osteoid metaplasia, so this manifestation can occur in malignant Schwannian tumors as well as in neurofibroma (fig. 2 C and D).

Whether or not all pigmented moles and malignant melanomas are derived from neuroectodermal cells I am uncertain. I have found pigmented mole cells within the neurofibromatous nerves of von Recklinghausen's disease where they must have come from neuroectoderm and so I adhere to Masson's (1926) hypothesis of their origin for at least some moles and melanomas.

*Tumors Composed of Multiple Tissues of which Nerves Form Part.*—The glomus tumor and the cutaneous leiomyoma are tumors with such an unusual degree of innervation that it seems necessary to make some note of the fact in any discussion of the tumors of the peripheral nervous system (Murray and Stout, 1942; Stout, 1937).

*Tumors and Lesions Associated with von Recklinghausen's Disease.*—In this group are included the secondary growths which are not primarily neurogenous but the development of which is in some way associated with multiple neurofibromatosis. The exact relationship is unknown. It must be remarked that the elephantiac hypertrophies are not those such as have been described by Masson and Branch (1945), Martinez Gutierrez (1943) and others for the appendix in which there is an associated ganglioneurofibromatosis but rather the cases of Baltisberger (1922) and Pick (1923) in which there was an enlargement of the ileum secondary to neurofibromatosis of the mesenteric plexus. Similar enlargements of bone have been recorded by Friedman (1944) and Stout (1946).

*Mesodermal Tumors.*—The only tumors of meso-

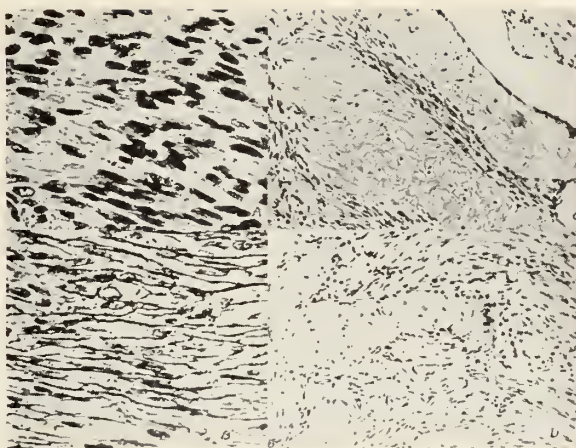


Fig. 2. Compound photomicrograph showing, upper left, malignant Schwannoma of buttock with alignment of nuclei; lower left, the same tumor stained by the Laidlaw silver connective tissue method showing the long wiry reticulin fibers. Upper right, malignant Schwannoma of the cervical plexus with formation of metaplastic cartilage among the Schwannian cells; lower right, the same tumor showing formation of osteoid.

dermal origin recognized definitely by me are the benign hemangioma (Sato, 1913; Sommer, 1922), and the malignant hemangioendothelioma of which I have seen one example arising in the sciatic nerve. Lipomas of nerves may be either mesodermal or neuroectodermal in origin. While pure fibromas and degeneration ganglions (Haar, 1926; Wadstein, 1931) similar to those found in connection with joints and tendon sheaths have been described, I have never seen either of them and feel some doubt as to their occurrence. Foot (1940) has suggested that some of the fibrous xanthomas of the skin are derivatives of the nerve sheath. There does not exist any proof of this so far as I am aware. The most important tumor of mesodermal origin ascribed to the nerve sheath is the deep fibrosarcoma which Stewart and Copeland (1931) following Ewing's (1928) suggestion have called neurogenic sarcoma. While one cannot deny the possibility that malignant fibrosarcomas can develop from the nerve sheaths, it is my opinion that Stewart and Copeland have included two different tumor types under the head of neurogenic sarcoma: one of them is the malignant Schwannoma and the other a fibrosarcoma starting from fascial or other tissues outside of the nerve and secondarily involving it. This, of course, is not primarily a nerve sheath tumor at all. In my opinion the term neurogenic sarcoma is confusing and obstructive and should be abandoned.

Secondary neoplasms have to be mentioned, although they do not arise from the structures of the nervous system. Direct invasion of nerves is not too uncommon but metastases from a distance lodging in the peripheral nerves are exceedingly rare (Rössle, 1921). Examples of tumors arising from a ganglion or paraganglion within a nerve sheath are the paragangliomas developing apparently from the ganglion nodosum situated in the vagus nerve

(Stout, 1935) of which I have observed two cases, and those which arise from the so-called glomus jugularis in the middle ear (Winship et al, 1948) of which there are seven examples in the Laboratory of Surgical Pathology, Columbia University, to be published by Lattes and Waltner.

*Tumors of Sympathetic Ganglia.*—These are sufficiently well known to need but little comment. The ganglioneuromas are either completely differentiated, in which case they are entirely benign and look like great enlargements of sympathetic ganglia, or else they are only partly differentiated, in which case it is possible for them to metastasize. Such partly differentiated tumors are of two varieties; in one, incompletely differentiated sympatheticoblasts are scattered diffusely among adult ganglion cells while in the other, the tumor is made up of two parts, a fully differentiated one and a separate area indistinguishable from sympatheticoblastoma. This variety is always malignant (Stout, 1946). The sympatheticoblastoma may form pseudorosettes or it may consist entirely of undifferentiated sympatheticoblasts. Tissue culture is an excellent method to study these tumors for the cells survive in vitro and develop neurites within twenty-four hours. Their metastases in bone can thus be differentiated readily from Ewing tumor. By this method Dr. Murray has identified several sympatheticoblastomas in adults which leads to the belief that these tumors are not as uncommon in adults as formerly was supposed.

*Tumors of Paraganglionic Cells.*—These rare tumors may be either hormonally active, in which case the cells contain chromaffinic granules and the growth may be called a pheochromocytoma, or there may be no granules and no adrenalin-like substance secreted, in which event the tumor conveniently can be designated a paraganglioma. Thus most of the tumors in the neck are paragangliomas while the suprarenal medulla and retroperitoneal tumors which are almost always hormonally active causing hypertension are pheochromocytomas. Strangely enough the nonfunctional paraganglioma is usually, although not always, a benign tumor while the functionally active pheochromocytoma may metastasize (Cahill). There is no question about the neurectodermal origin of these tumors.

#### SUMMARY

A brief survey of the entire roster of the tumors of the peripheral nervous system has been made from the point of view of their histogenesis. This has led to the belief that almost all of them are of neurectodermal origin and that the mesodermal elements of the peripheral nervous system hardly enter at all into the formation of most of the tumors. It is of interest to find that the neurectodermal cell derivatives are extremely versatile and not only multiply with ease in vitro but by metaplasia produce an astounding variety of tissues not ordinarily thought of as being derived from them. The writer opposes the use of such terms as neurogenic

sarcoma because the word sarcoma suggests a mesodermal origin for neoplasms which are almost certainly neurectodermal and which may better be designated as malignant Schwannomas.

Columbia University College of Physicians and Surgeons.

#### BIBLIOGRAPHY

- Bailey, P., and Herrmann, J. D.: The Role of the Cells of Schwann in the Formation of Tumors of the Peripheral Nerves, *Am. J. Path.* **14**:1, 1938.
- Baltisberger, W.: Ein Fall von Rankenneurome im Mesenterium des Dünndarms, *Ziegler's Beitr. z. path. Anat.* **70**:459, 1922.
- Cahill, G. F.: Hormonal Tumors of the Adrenal, *Surgery* **16**:233, 1944.
- Cohn, I.: Epithelial Neoplasms of Peripheral and Cranial Nerves, *Arch. Surg.* **17**:117, 1928.
- Ewing, J.: *Neoplastic Diseases*, W. B. Saunders Co., Philadelphia and London, 3rd Ed. 1928, p. 165.
- Foot, N. C.: Histology of Tumors of the Peripheral Nerves, *Arch. Path.* **30**:772, 1940.
- Friedman, M. M.: Neurofibromatosis of Bone, *Am. J. Roentgenol. & Rad. Therap.* **51**:623, 1944.
- Garre, C.: Ueber sekundär maligne Neurome, *Beitr. z. klin. Chir.* **9**:465, 1892.
- Groth, K. E.: Kongenitale, teilweise maligne Geschwulstbildung in Nervus ischiadicus mit ausschliessender elephan-tiasis, *Acta path. et microbiol. Scandinav.* **11**:44, 1934.
- Haar: Ueber Ganglion in der Nervenscheide, *Zentralbl. f. Chir.* **53**:2551, 1926.
- Hackel, W.: Zur Frage über das Medulloepitheliom, *Beitr. z. path. Anat.* **92**:510, 1934.
- Landacre, F. L.: The Fate of the Neural Crest in the Head of the Urodeles, *J. Comp. Neurol.* **33**:1, 1921.
- Lanford, J. A., and Cohn, I.: Ependymal Neoplasm of the Median Nerve, *Southern Med.* **20**:273, 1927.
- Lattes, R., and Waltner, J. G.: Non-chromaffin Paraganglioma of the Middle Ear, (In press).
- Lhermitte, J., and Dumas, R.: Ganglio-neuromes disséminés du système nerveux périphérique, *Bull. Assoc. franç. p. l'étude du cancer* **9**:23, 1920.
- Martinez Gutierrez, M.: Ganglioneuromatosis y gigantismo del Appendix, *Rev. med. de Chile* **71**:780, 1943.
- Masson, P.: Les Naevi pigmentaires, *Ann. d'anat. path.* **3**:417 and 657, 1926.
- Masson, P.: Experimental and Spontaneous Schwannomas (Peripheral Gliomas), *Am. J. Path.* **8**:367, 1932.
- Masson, P.: Recklinghausen's Neurofibromatosis, Sensory Neuromas and Motor Neuromas, *E. Libman Anniversary Volumes* **2**:793, 1932.
- Masson, P.: Neural Proliferations in the Vermiform Appendix, *Cytology and Cellular Pathology of the Nervous System*, New York, Paul B. Hoeber, 1932, vol. III, p. 1095.
- Masson, P.: The Role of the Neural Crests in the Embryonal Adenosarcomas of the Kidney, *Am. J. Cancer* **33**:1, 1938.
- Masson, P.: Tumeurs encapsulées et bénignes des Nerfs, *Rev. Canad. de Biol.* **1**:209, 1942.
- Masson, P.: (Personal communication) 1946.
- Masson, P., and Branch, A.: Gigantisme et Ganglioneuromatose de l'Appendice, *Rev. Canad. de Biol.* **4**:219, 1945.
- Masson, P., and Martin, J. F.: Rhabdomyomes des Nerfs, *Bull. Assoc. franç. p. l'étude du cancer* **27**:751, 1938.
- Murray, M. R., and Stout, A. P.: Demonstration of the Formation of Reticulin by Schwannian Cells in Vitro, *Am. J. Path.* **18**:585, 1942.
- Murray, M. R., and Stout, A. P.: The Glomus Tumor, *Am. J. Path.* **18**:183, 1942.
- Murray, M. R.; Stout, A. P., and Bradley, C.: Schwann Cell Versus Fibroblast as the Origin of the Specific Nerve Sheath Tumor, *Am. J. Path.* **16**:41, 1940.
- Penfield, W.: Tumors of the Sheaths of the Nervous System; in *Cytology and Cellular Pathology of the Nervous System*, Paul Hoeber, New York, 1932, vol. 3, p. 955.
- Pick, L.: Ueber neurofibromatose und partiellen Riesenwuche über die Sektorenförmige Kombination von wahren partiellen Riesenwuchs des Darmes mit mesenterialer Neurofibromatose, *Ziegler's Beitr. z. path. Anat.* **71**:560, 1923.
- Rössle, R.: Sarkom des Pankreas—Kopfes mit fast ausschliesslichen und zellreichen metastasen der peripheren Nerven, *Beitr. z. path. Anat.* **69**:183, 1921.
- Sato, S.: Ueber das cavernöse Angiom des Peripherischen Nervensystems, *Arch. f. klin. Chir.* **100**:553, 1913.
- Sommer, R.: Ueber kavernöse Angiome am peripheren Nervensystem, *Deutsch. Ztschr. f. Chir.* **173**:65, 1922.
- Stewart, F. W., and Copeland, M. M.: Neurogenic Sarcoma, *Am. J. Cancer* **15**:1235, 1931.
- Stone, L. S.: Experiments Showing the Role of Migrating Neural Crest (Mesectoderm) in the Formation of Head, Skeleton, and Loose Connective Tissue in Rana Palustris, *Arch. f. Entwicklungsmechn. d. Organ.* **118**:40, 1929.
- Stout, A. P.: A Tumor of the Ulnar Nerve, *Proc. N. Y. Path. Soc. (N.S.)* **18**:2, 1918.
- Stout, A. P.: The Malignant Tumors of the Peripheral Nerves, *Am. J. Cancer* **25**:1, 1935.
- Stout, A. P.: Solitary Cutaneous and Subcutaneous Leiomyoma, *Am. J. Cancer* **29**:435, 1937.
- Stout, A. P.: Neurofibroma and Neurilemoma, *Clin. Proc.* **5**:1, 1946.



Stout, A. P.: Ganglioneuroma of the Sympathetic Nervous System, Surg., Gynec. & Obst. 84:101-110, 1947.

Stout, A. P.: Tumores del Sistema Nervioso Periferico, Arch. Soc. Argentina de Anat. Normal y Patológica 8:551, 1946.

Stout, A. P.: Fibrosarcoma: The Malignant Tumor of Fibroblasts, Cancer 1:30 (May) 1948.

Stout, A. P., and Murray, M. R.: Neuroepithelioma of the Radial Nerve with a Study of Its Behavior in Vitro, Rev. Canad. de Biol. 1:651, 1942.

Tarlov, I. M.: Origin of Perineural Fibroblastoma, Am. J. Path. 16:33, 1940.

Wadstein, T.: Two Cases of Ganglia in the Sheath of the Peroneal Nerve, Acta orthop. Scandinav. 2:221, 1931-32.

Westphalen, H.: Multiple Fibrome der Haut, der Nerven und Ganglien mit Uebergang in Sarkom, Arch. f. path. Anat. 114:29, 1888.

Wilson, H.: Extraskelatal ossifying tumors, Ann. Surg. 113:95, 1941.

Winship, T.; Klopp, C. T., and Jenkins, W. H.: Glomic-jugularis Tumors, Cancer 1:441-448, 1948.

Worster-Drought, C.; Carnegie-Dickson, W. E., and McMenemy, W. H.: Multiple Meningeal and Perineural Tumors with Analogous Changes in the glia and Ependyma (Neurofibroblastomatosis), Brain 60:86, 1935.

## TUMOR SEMINAR

Conducted by ARTHUR PURDY STOUT, M.D., New York, N. Y.

### Multiple Squamous Cell Epitheliomas of the Scalp Arising From Hair Follicles (?) or Sebaceous Cysts (?)

*History* (presented by Richard E. Johnson, M.D., Columbia).—Ten years previous to admission, this 78 year old white woman noticed small nodules of the scalp. During the last five years these had increased rapidly in number and in size. Examination revealed the scalp to be completely involved by multiple subcutaneous tumors ranging from 1 to 14 cm. in diameter. The larger masses were multilobulated with focal areas of ulceration. X-rays revealed no involvement of the underlying bone. There were two firm lymph nodes in the posterior cervical chain on the right, each 2 cm. in diameter. These were excised and showed only hyperplasia. All of the nodules were excised with multiple operations and the defects covered with skin grafts. Grossly, the tumors showed a combined cystic and solid structure arranged in coarse lobules varying from 1 to 3.5 cm. in diameter. The large cysts were filled with grayish white, cheesy material; the smaller contained clear fluid. The solid portions were glistening white and finely lobulated.

ARTHUR PURDY STOUT, M.D.: *Microscopic Description* (Fig. 1).—Well beneath the epidermis there are multiple nodules composed of relatively well differentiated squamous tumor cells which are united by intercellular bridges and show a marked tendency to form small "pearls." These are not ordinary pearls, however, for they do not as a rule have keratinized centers. Instead, the center is occupied by one or two rounded cells which seem to have undergone various degenerative changes, sometimes colorless, sometimes brownish, and occasionally leaving a tiny empty space. In other areas keratinization has occurred; dead cells and keratinized debris sometimes form large enough masses in the surrounding scar tissue so that they have been attacked by giant phagocytes. Tonofibrils are present in many cells. Mitoses are rare. The large masses extend to the deepest part of the section and have been cut through there.

*Comment.*—This case represents one of the cases of multiple massive epithelial tumors which seem

especially prone to occur in the scalp. Obviously it is not a turban tumor, for that imitates the microscopic appearance of a basal cell tumor with certain characteristic differences. There is no proof in the section that the tumor has developed in multiple comedones or sebaceous cysts. This sometimes can lead to the formation of massive scalp cancers. It is not impossible, however, that these tumors arose from such cysts and that in this section all trace of the origin has vanished. The cancers which come from sebaceous glands which I have been able to recognize have been either basal cell epitheliomas or sebaceous gland carcinomas which somewhat resemble basal cell tumors but have a marked tendency to reproduce atypical sebaceous cells more or less filled with lipid droplets. Such a case was reported by Severance and Beach; it originated in the toe, metastasized to the inguinal glands and, later, killed the individual. It looked quite different from this. I would exclude the sweat glands and their ducts as a possible source because, although the variety of histologic tumor types coming from sweat gland epithelium is truly remarkable, none, so far as I am aware, looks like this tumor. This leaves for consideration the hair follicle epithelium. I have long been puzzled by the term "trichoepithelioma" because it has been applied to a most diverse group of tumors. Some of these occurring in young people with the development of epithelial structures in the corium which look like caricatures of hair follicles are almost certainly nevroid growths. They are of some interest because seemingly their growth is associated with the production of scar tissue which contracts, producing a hard, puckered depression which can be puzzling in clinical diagnosis. But ordinary squamous cell epitheliomas also sometimes seem to spring from hair follicles rather than epidermis. In addition to these, there are basal cell tumors which seem to arise from hair follicle epithelium and sometimes vaguely reproduce tubular structures. Thus, if one uses the term "trichoepithelioma" it could mean either a nevus, a basal or a squamous cell epithelioma and consequently its usefulness has been destroyed.

So what is being dealt with here is multiple or multicentric squamous cell epithelioma, possibly arising from hair follicles, and possibly attempting

The Tumor Seminar conducted by Arthur Purdy Stout, M.D., Professor of Surgery, Columbia University College of Physicians and Surgeons, New York City, was presented at the Ellis Fischel State Cancer Hospital, Columbia, Missouri, November 6, 1948, under the auspices of the St. Louis Pathological Society and sponsored by the Missouri Branch of the American Cancer Society.

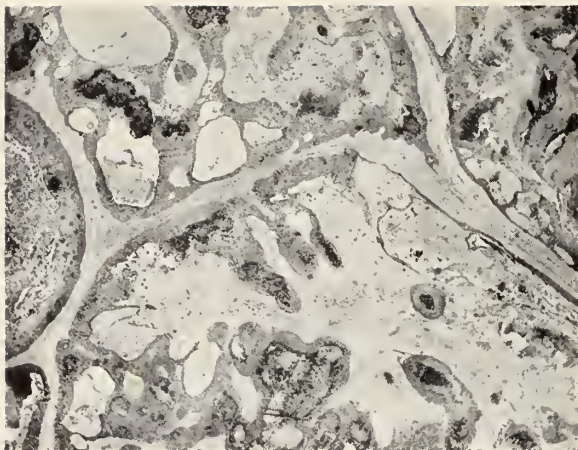


Fig. 1. Low power photomicrograph of several adjacent nodules of squamous epithelial tumor cells. The dark areas represent calcification. The tendency to form vague caricatures of hair follicles is suggested.

in some way, to some degree, to reproduce their appearance. I do not agree with the diagnosis of benign calcifying epithelioma because, to me, that, too, is practically a nevoid production. One sees it quite frequently in children and young adults and generally it consists of an encapsulated mass, or certainly a circumscribed, rounded mass, with the ghosts of epithelial cells collected in a solid mass; occasionally there are some viable cells, but often almost all of the cells are just ghosts. That degenerated epithelium often calcifies and, if it happens to get invaded by granulation tissue, ossifies secondarily. That kind of tumor, as I have seen it, has never invaded outside of its capsule and has never produced an appearance such as that seen in this scalp tumor. The turban tumor is characteristic in its gross and histologic appearance, presenting the picture of a basal cell epithelioma. But when one analyzes it one sees first that each group of cells is practically enclosed within a fibrous band. That is different, of course, from the basal cell epithelioma which is an infiltrating type of growth. Then, when one looks at the cells inside this fibrous band many of them have a peculiar type of "fibrosis" overcoming the cells and showing, in the hematoxylin and eosin section, as reddish masses right in the center of the cell or, finally, replacing the cell completely. I do not see anything like that in this case, so I do not agree with the diagnosis of turban tumor.

I think the majority of these tumors do not metastasize. The varieties of squamous cell tumor and basal cell tumor that make large masses tending to project above the surface are much less apt to metastasize than the infiltrating type of basal or squamous cell epithelioma. This case is no exception. However, I would not say that they never metastasize, because I have seen such a tumor as this metastasize to the cervical nodes.

#### DISCUSSION

MARK C. WHELOCK, M.D., *Chicago, Ill.* I would like

you to explain, Dr. Stout, the presence of foreign body giant cells in relation to the tumor as being possibly a contributory evidence that the origin is in an epidermoid cyst. I would like to challenge your statement that you have seen only squamous cell carcinomas in epidermoid cysts, on the basis of the fact that we are reviewing about 700 skin tumors in Chicago now, and in these there is one of basal cell type arising in an epidermoid cyst. We have seen one recently at the Wesley Hospital, and there are two in the files of the Westfield Cancer Hospital in Massachusetts.

DR. STOUT: I think the foreign body giant cells are present as phagocytes for the masses of dead cells and, in some instances, keratin, that are in and around the living cells. I believe that whenever one gets masses of dead material, whether or not they are cells, phagocytes are apt to appear around them. I think that possibly I misled you about the development of squamous and basal cell epitheliomas in connection with sebaceous cysts, because I certainly agree that both kinds can and do develop in relation to sebaceous cysts. What I referred to is the so-called benign calcifying epithelioma. I have never seen one of those behave as a malignant tumor. The kinds of sebaceous cysts that I have seen that have developed either basal or squamous cell tumors have been the ordinary kind of sebaceous cyst. Generally, these are in the form of large comedones with an opening on the surface and then the tumor grows either into the cyst or out to the surface, invading the tissues around it. I would not call a tumor of a sebaceous cyst a truly malignant epithelioma unless it was invading outside of the wall of the cyst.

M. P. NEAL, M.D., *Columbia*: I saw this specimen before anybody else and made an original diagnosis of squamous cell carcinoma. At that time the patient had not had multiple excisions of the primary lesions; in other words, it was a primary lesion without modification of surgery, and the giant cells there were interpreted to be the result of inflammation, necrosis and as a reaction to calcium which was present in the original lesion.

DR. STOUT: Do you think now that the apparent multiplicity of areas of involvement is secondary to the operation? Did you feel that when it was first excised it was one area of tumor involvement?

DR. NEAL: When the patient was first seen there were multiple lesions, but there had been treatment with other agencies before surgery was employed.

DR. STOUT: Then it could be a tumor of multicentric origin, could it not? Certainly there are such tumors that seem, although they are gathered together in one big mass, to have multiple foci of more or less independent growth.

EDGAR TAFT, M.D., *Kansas City, Kansas*: What is your opinion of the so-called hair matrix origin for the basal cell carcinomas?

DR. STOUT: The term "trichoepithelioma" has been applied to both basal cell and squamous cell tumors, and therefore it has ceased to have any definite meaning at all to me. I prefer to say basal cell epithelioma of hair follicle origin, or squamous cell epithelioma of hair follicle origin. I generally put a question mark after that because I do not know how I can surely tell them. But that seems to me a better way than just to use the term "trichoepithelioma" and think one has accomplished something because one has said a nice long word.

DR. TAFT: Do you think that the epithelial pearls



which were present in this tumor are the same sort that one sees in a basal cell carcinoma?

DR. STOUT: Pearls such as these do sometimes appear in basal cell tumors, but I felt that this tumor was chiefly epidermoid because the characteristics of many of the cells are those of squamous epidermal cells.

CHARLES ECKERT, M.D., *St. Louis*: Do you think that the history might play some part in determining the origin of this lesion? It states that ten years ago multiple lesions were seen, and certainly the most commonly encountered such lesions would be sebaceous cysts.

DR. STOUT: The most common lesions are wens on the top of the head, of course, but I did not think that I could see definite traces of sebaceous cysts here, and if it is of multicentric origin from hair follicles (as I suggested) such a type of growth would then make nodules below the surface of the epidermis in just the same situation that you would expect to find a sebaceous cyst. So, while your point is well taken, I am afraid we cannot prove it one way or another.

DR. ECKERT: Do you interpret this as malignant from the start? If you say that there are multiple carcinomas arising from hair follicles, were they always carcinomas from the moment of their origin as nodules, grown slowly during a period of ten years, or what type of lesion were they originally?

DR. STOUT: I think they are malignant in name but not in behaviour. All are familiar with the basal cell tumors that last for forty years; I have seen two that I recall vividly. In one, the tumor was present near the inner angle of the eye; it was improperly irradiated, the orbit became invaded, and after thirty years of growth and repeated attempts to cure it, including exenteration of the eye and subsequent removal of a part of the skull, the tumor finally killed by invasion of the meninges with meningitis and death. I think the woman had had the tumor ten years before it was treated and she lived for thirty years afterward. So length and duration are not always a criterion of malignancy in a growth.

JOHN MODLIN, M.D., *Columbia*: I believe there may be some confusion about the history of this case. The patient was seen on the surgical service here, but the only history of previous treatment obtained was that of partial removal of one of the ulcerated areas. Almost the entire scalp was involved, but clinically there were areas of normal scalp in between these lesions. Local areas were removed that apparently had no connection whatsoever with the large ulcerated lesions.

DR. STOUT: That, of course required extensive skin grafting. Are all those areas well healed?

DR. MODLIN: The region is entirely healed and the patient has been seen once without evidence of persistent disease.

DR. STOUT: I anticipate that she is cured. Were there any palpable enlarged lymph nodes other than inflammatory ones?

DR. MODLIN: The clinical appearance was that of an ulcerated lesion with retroauricular lymph nodes such as are seen in inflammatory lesions of the scalp.

LAUREN V. ACKERMAN, M.D., *St. Louis*: Dr. Johnson, were not some of these cysts apparently normal sebaceous cysts without evidence of this process?

RICHARD E. JOHNSON, M.D., *Columbia*: That was my impression. We have multiple sections of this lesion and in some instances there are islands which certainly are intermediate between a simple sebaceous cyst and the frank invasive carcinoma present in the greater portion of the lesion.

DR. STOUT: That is the best argument I have heard in favor of this being of sebaceous cyst origin.

WILLIAM W. TRIBBY, M.D., *Memphis, Tenn.*: Do you make a distinction between sebaceous cyst and epidermal inclusion cysts, or are they the same thing?

DR. STOUT: All the trouble comes from the term "sebaceous cyst." I do not know whether or not the national nomenclature still calls them steatomas, but to me both sebaceous cyst and steatoma connote a cyst containing sebum. So far as I know, these so-called sebaceous cysts do not contain sebum; they contain desquamated epithelial debris in various stages of hydration and degeneration, but they do not contain sebum. I believe the term sebaceous cyst should be abandoned, but it is impossible to do so because it has become firmly fixed in the American literature. The fact that the "blue book" calls them steatoma has not had any effect on the general public of doctors. I have never met anyone who calls them steatoma except in those places that demand the use of that standard nomenclature. Epidermoid cyst would be a much better term, because they are lined with epidermis. I do not know how many thousand of sections of these epidermoid or sebaceous cysts I have seen. We section every one that is removed (it is a favorite indoor sport of all clinics, I suspect, to take out sebaceous cysts) and I think that in the entire series of thousands, I have seen exactly two that had sebaceous cells mixed up with the epidermoid cells right in the wall. I do not mean that these were dermoid cysts which have a lining of skin with its accessory structures but, actually, a lining of epidermis with a few scattered sebaceous cells in it. I think in those articles by Shields Warren, Olive Gates and their associates on skin tumors, they also described that type of cyst, said it was a true sebaceous cyst and all the rest were not, and stated that it was rare. That is a point well taken, but one can never get it across because everybody says, "There is a sebaceous cyst; that's what we are going to call it." And I imagine that everyone who graduates from a medical school everywhere in this country comes out with the impression that a sebaceous cyst contains sebum. I ask our medical students that all the time, and although the day before I have just told them it does not contain sebum, that passes right through and they say, "It contains sebum." I have asked quantities of surgeons and I sometimes ask it when I examine for the American Board of Surgery, and I never had a surgeon tell me anything but that a sebaceous cyst contains sebum. So it is, I am afraid, too minor a point for the truth to prevail! But I would like to record my disbelief of sebum in a sebaceous cyst.

There is one other type, too, that one can call epidermoid cyst if one wishes and that is the implantation cyst. Even without a history, I think one can sometimes tell the difference between the sebaceous cyst (I am going to continue to use that term because all know what it means) and the implantation cyst. The sebaceous cyst is almost invariably lined with squamous epithelium without rete pegs. The implantation cyst generally will imitate the appearance of the epidermis much more accurately by producing rete pegs, and is usually deeper. It may even be in the subcutaneous tissue and it is rarely right up in the corium; it may be partly in the corium, but usually it is deeper than the ordinary sebaceous cyst.

#### ADDENDUM

The discussion of this case took place somewhat at cross purposes because some of those participat-

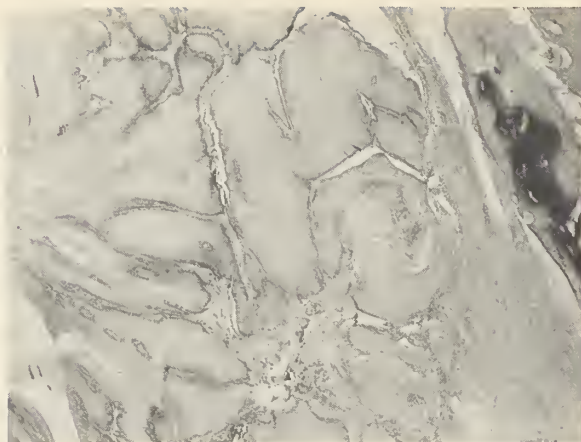


Fig. 2. Low power photomicrograph showing well differentiated masses of squamous epithelial tumor cells invading close to the alveolar bone of the mandible.

ing had seen all of the sections while others had seen only the single slide distributed to all. When all of the sections are examined it is obvious that it is a multicentric growth. While many of the independent nodules appear to resemble sebaceous cysts, all of them are lined with squamous epithelial tumor cells and there is only a difference of degree of proliferation of these tumor cells and the fact that some have infiltrated the surrounding tissues while others have not, which serves to distinguish between them. The problem of the origin of these epitheliomas is still unsolved. Since none of the nodules is an entirely normal sebaceous cyst it is not possible to feel confident that each of them developed in the preexisting cyst. On the other hand, there is no definite evidence that the tumors developed from the epithelium of hair follicles. Perhaps, therefore, both suggestions have some degree of credibility: these tumors may have arisen from the epithelium of some one or another of the accessory skin structures and in their growth have tended to form both cysts and caricatures of hair follicles.

#### BIBLIOGRAPHY

- Beach, A., and Severance, A. O.: Sebaceous Gland Carcinoma, *Ann. Surg.* **115**:258-266, 1942.  
 Warren, S., and Warvi, W. N.: Tumors of Sebaceous Glands, *Am. J. Path.* **19**:441-459, 1943.  
 Warvi, W. N., and Gates, O.: Epithelial Cysts and Cystic Tumors of the Skin, *Am. J. Path.* **19**:765-783, 1943.

### Papillary Squamous Cell Epithelioma of Gum of Mandible

*History* (presented by Richard E. Johnson, M.D., Ellis Fischel State Cancer Hospital, Columbia).—This 80 year old white man, an inveterate tobacco chewer, complained of a "sore" of the lower gingiva which had been present for two years. Preceding this, for five or six years he had noticed small, white "blisters" in the same area. Examination revealed an elevated, irregular lesion with a pebbly surface on the posterior aspect of the lower gingiva at the symphysis. It measured 4.5 by 2.5 by 1 cm. and extended onto the floor of the mouth for a short distance. The regional lymph nodes were not palpable. An electrocardiogram was interpreted as showing severe myocardial damage. A wide excision,

including a portion of the superior ledge of the mandible underlying the lesion, was performed.

ARTHUR PURDY STOUT, M.D.: *Microscopic Description* (Fig. 2).—This papillary tumor springs from the mucosa and reproduces in an enormously exaggerated fashion the rete pegs and papillae of the squamous mucous membrane. Stratification is everywhere well preserved as is the differentiation of the individual cells. One can observe, however, in this case that the cell masses have pushed downward toward the bone of the alveolus and the deepest cells are not retained behind a basement membrane, although the penetration is always kept in alignment and is not dentate. The tumor has not reached the bone.

*Comment.*—Unless one is familiar with this form of cancer, one might be tempted to consider it a benign papilloma, especially in those cases in which there has been as yet no penetration or violation of the basement membrane. But experience shows that this is a tumor form which pursues a definite course. It grows slowly over a long period of time, usually starting in an area of leukoplakia, gradually penetrating the deeper tissues and finally the bone, while always maintaining a high degree of differentiation, and only metastasizing (if at all) as a late phenomenon. In addition to the gums, hard palate, tongue and other parts of the oral cavity and pharynx, such papillary epitheliomas also have been observed in the larynx and skin where several times I have observed them penetrate downward into the underlying bones of the leg and foot in connection with chronic sinus formation, while always maintaining this high degree of differentiation, so that in biopsies one might hesitate to classify the case as cancer. There are two lessons to be learned from this case: first, that it is of great importance for a pathologist to see for himself any lesion from which an equivocal biopsy is taken or, failing that, to obtain a careful description of it before hazarding a diagnosis; the second is that a restricted excision such as was carried out in this case usually will suffice to cure.

#### DISCUSSION

DR STOUT: Until I became acquainted with this variety of cancer (for I feel convinced that it is a cancer) I fell into the error of interpreting the first case that was brought to my attention from the biopsies alone. The biopsies always looked to me so well differentiated that I thought it was nothing but the hyperplasia of leukoplakia. But when, after repeated biopsies, I saw the patient and the x-rays showing the tumor growing right into the bone, I had to change my opinion. I have talked with Dr. Fred Stewart about this variety; he is fully familiar with it and has seen a number of examples at Memorial Hospital. It is certainly an interesting variety of tumor, not common, and so late in its metastasis that if one can encounter it at a fairly early stage, I think one can forego the resection of the regional lymph nodes.

Some have made a diagnosis of acanthoma. I presume that that term is used synonymously with a squamous cell carcinoma. I would like to know if anybody disagrees with that idea because it is not a term that I



like to use for I am afraid it may mislead someone. What do you think about acanthoma, Dr. Ackerman?

DR. ACKERMAN: I doubt that it refers to verrucous carcinoma. One other point about these tumors: so many of them were seen when I was at the State Cancer Hospital (probably because Missourians live a long time and chew a great deal of tobacco) that I came to recognize them in the same fashion as Dr. Stout, falling into the same trap probably more often than he, and I was quite disturbed when the clinicians told me that this benign tumor which I had diagnosed had completely destroyed the mandible. In the group which was reported from the Cancer Hospital (some thirty cases) local invasion of contiguous structures occurred frequently, and in only one instance was a node directly invaded by the tumor, and in no instance were there any distant metastases. In the patients who died, none ever died of cancer; they died of some other cause. I think it is a definite entity. I was interested to find in talking to Kanolkhar that he apparently had not seen this variant, although he sees in India a vast amount of oral cavity cancer.

DR. STOUT: I would like the individuals who called this acanthoma to tell us what they mean by that term.

JOHN SAXTON, M.D., *St. Louis*: I called it acanthoma with squamous carcinoma. My understanding of acanthoma is a benign tumor with conspicuous hyperplasia of the prickle cell layer and usually I do not like to make such a diagnosis without qualifying it one way or the other.

DR. WHELOCK: In Cleveland, acanthoma is a commonly used term usually applying either to the endometrium or the cervix, and including a malignancy of both the glandular and the squamous elements, but it does indicate malignancy, at least in that particular locale.

DR. STOUT: Now you are referring to adeno-acanthoma. I think I would understand that it was a malignant process if it were called adeno-acanthoma. When the term acanthoma alone is used, I am not certain.

DR. WHELOCK: I imagine that the term acanthoma was employed as a matter of abbreviation so that it would not be necessary to write about three lines of diagnosis. I would like to ask if a good way in which to diagnose this particular lesion would not be to call it a squamous cell carcinoma and in quotation marks afterwards, "verrucous form," because many clinicians are not familiar with the term verrucous carcinoma.

DR. STOUT: I agree with that. I would want to put the carcinoma first and qualify it with the verrucous or papillary form, whichever one chooses.

S. M. RABSON, M.D., *Fort Wayne, Ind.*: May I ask, Dr. Stout, do you ever use the term acanthoma?

DR. STOUT: No, I do not. I am something of an individualist and I try to reduce the terms that are used in connection with tumors to the lowest possible point so as not to multiply the terms that I use. I know it is common, for instance, to use the word adenocarcinoma. I never use the term at all; I call a carcinoma a carcinoma. And if it is a so well differentiated glandular form as to have lots of atypical glands present, then I simply say a well-differentiated carcinoma. I am still using the term epithelioma which almost everybody in this country has abandoned, preferring to use the word carcinoma indiscriminately for malignant epithelial tumors, whether arising from squamous or transitional epithelium or from glandular epithelium. But I believe that my terminology has some advantages for, if one calls a tumor that comes from squamous or transitional epithelium a carcinoma, there is no way to distinguish it from a tumor coming from glandular epithelium ex-

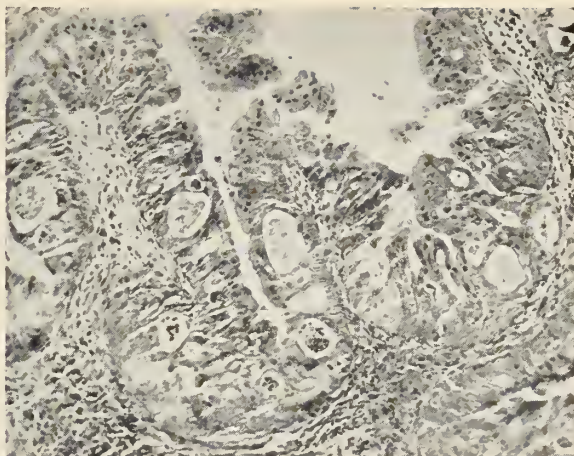


Fig. 3. Papillary adenomatous mucus-secreting carcinoma of the nasal cavity. Magnified 260 times.

cept by the use of some qualifying adjective or prefix, whereas if I use the term epithelioma, I know then that it comes from a surface epithelium which is not glandular. If it comes from a glandular epithelium, I call it a carcinoma.

BELA HALPERT, M.D., *Oklahoma City*: Do you call a squamous cell carcinoma of the lung an epithelioma?

DR. STOUT: Oh, yes! If it comes from the lining epithelium of a bronchus.

LEO LOWBEER, M.D., *Tulsa, Okla.*: It may interest you, Dr. Stout, that the famed founder of psychoanalysis, Dr. Sigmund Freud, suffered for many years from a mouth lesion identical with that just discussed. I have had occasion to examine biopsies from this lesion at various intervals. It was interpreted as a low grade squamous cell carcinoma on the basis of leukoplakia. It was held in check for many years by local surgery and radium. Dr. Freud was an extremely heavy smoker. He died many years later at an age of more than 80, presumably not from this lesion.

DR. NEAL: I am not trying to explain the term acanthoma, but a number of us who had contact with Drs. F. Robert Zeit, E. R. LeCount and H. G. Wells learned from these men that the term acanthoma is synonymous with squamous cell carcinoma.

DR. STOUT: All right. Now I know what the term acanthoma means. But I am not going to use it!

#### BIBLIOGRAPHY

Ackerman, Lauren V.: Verrucous Carcinoma of the Oral Cavity, *Surg.* 23:670-678, 1948.

### Papillary Carcinoma of Nasal Cavity

*History* (presented by J. E. Allen, M.D., Columbia). For more than six months prior to examination, this patient, a 56 year old white woman, had had a painless obstruction of the left nose that was associated with occasional bleeding and persistent purulent discharge. On examination, a polypoid, fungating mass was present in the left nostril. It appeared to originate from the left middle meatus and, upon the slightest manipulation, it bled freely. The left antrum was dark and nontender. The mass was partly excised and measured 2.5 by 1.5 by 1 cm.

ARTHUR PURDY STOUT, M.D.: *Microscopic Description* (Fig. 3).—The section shows a papillary tumor made up of tall cylindrical cells with acido-

philic granular cytoplasm and some tendency to form glandlike spaces containing droplets of acidophilic material. These cells have centrally placed nuclei of moderate size and show rare mitoses. They cover fibrovascular stalks and are sometimes heaped up several layers thick but there does not appear to be any real tendency to infiltrate.

*Comment.*—This is a rare but highly specialized variety of carcinoma which develops especially in the nares and accessory sinuses. It grows into the lumen, spreads centrifugally and slowly over the adjacent mucosa and remains localized for a long time, causing destruction by pressure necrosis rather than infiltrative growth. Eventually some of them penetrate and metastasize, but I think that a relatively small number do that. There is an illustration of a tumor much like this one under consideration in an old, old book called "Human Cancer," except that that tumor secreted mucin rather than the acidophilic material. The most complete discussion of these papillary tumors is contained in Ringertz' monograph from the Sabbatsberg Hospital in Stockholm where Hilding Bergstrand is the Chief. He furnishes a series of illustrations ranging from the fully differentiated cylindrical cell papillomas to infiltrating carcinomas. He stresses the great tendency to recurrence of these tumors, although he points out that some apparent recurrences may be new tumors because cases of multiple tumors are not uncommon. He is uncertain as to how frequently the transition from benign to malignant takes place.

These tumors are quite radiosensitive and in many instances this method of treatment will cause the disappearance of the local growth. But this does not give any guaranty of cure any more than does operative removal. There have been too few of these cases studied over a long period of years in relation to treatment to permit one to be dogmatic about the best method to use.

#### DISCUSSION

DR. STOUT: I have been much interested in this variety of growth and I can easily see reasons for not calling it a malignant growth, but where the story of a number of cases shows that some of them can eventually infiltrate and metastasize, I think it is probably better to consider such a case with the malignant tumors rather than with the entirely benign ones. Dr. Ackerman, have you encountered cases like this?

DR. ACKERMAN: I first want to say that I made the wrong diagnosis on this case. This is about the first one I have ever seen of this character and it was only after considerable soul searching that I finally decided it was benign. At six months' follow-up the patient is still all right but, as you say, that is no assurance against the future course of the lesion.

DR. STOUT: Have you had any experience with such cases as this, Dr. Severance?

A. O. SEVERANCE, M.D., *San Antonio, Texas*: I never saw one except for a picture in your book "Human Cancer."

DR. STOUT: You remember that?

DR. SEVERANCE: I remember it, but I do not agree with your diagnosis on this tumor. I thought this pres-

ent tumor looked benign histologically and yet resembled the picture of the one called malignant in your book! Did you call it malignant because of its behaviour?

DR. STOUT: Yes. It recurred repeatedly following attempts at local excision and radiotherapy. Finally, the lacrimal duct was obstructed and a radical excision was carried out. This resulted in apparent cure. I believe that a tumor which displays such aggressive destructive growth should be called malignant even if it does not metastasize.

DR. HALPERT: I have not seen any neoplasm of this kind which metastasized. The slide reminded me of apocrine gland tumors in the mammary gland in which there are infoldings lined with almost identical cells. I, too, thought that this was a benign growth.

DR. STOUT: I have already stated why I would classify this as malignant.

DR. LOWBEER: Could this tumor be similar to one which has been described as a Schneiderian tumor?

DR. STOUT: I see not too many cases of benign and malignant tumors of the nasal cavity and sinuses, and it seems to me that almost every one that comes along is different from any one I have seen before! I think I am seeing a little light in salivary gland tumors, but I am still in a complete fog about the various types of tumors of the nasal cavity and the accessory sinuses and, frankly, in reply to your question, I do not know the criteria for recognizing a Schneiderian cancer or tumor.

JOSEPH F. KUZMA, M.D., *Milwaukee, Wis.*: I do not want to record a personal experience, but I think I might cite the book on E. N. T. pathology by Eggston and Wolfe. I think there they show photographs which are identical with this and their caution is that these are frequently mistakenly diagnosed as cancer.

DR. WHELOCK: I called this a papillary adenocarcinoma, also; I would not change my diagnosis until I hear the final outcome of the case, because I know at the Tumor Clinic in City Hospital in Cleveland they were following about two or three of these cases and it seems to me I have seen several of them elsewhere. As a general rule the patients do die of invasion if they do not commit suicide beforehand. The pain is so excruciating that these individuals do have that tendency. I do not believe one can depend too much on the histologic picture. As I understand it, the clinical picture is suggestive of an invasive neoplasm, despite the histologic characteristics. I think those should be weighed in the diagnosis.

DR. STOUT: I could not agree more heartily with everything you say. If one is going to try to diagnose tumors on histologic characteristics alone, one is going to get led into constant error. One certainly must be familiar with the way in which tumors behave in different parts of the body. All know that tumors called by the same name arising in various parts of the body behave with the greatest difference. Some of them are malignant and metastasize freely while others do not. So one must have a combination of clinical observations and biologic characteristics to add to the histologic characteristics.

I gather from this audience that this is certainly an uncommon type of lesion since few have encountered it.

#### BIBLIOGRAPHY

Holmgren, G., and Berven, E.: Erfahrungen über die Klinik Gewisser Bösartigen Geschwülste der Oberen Luft- und Speisewege. 5. Nordischer Kongress für Otolaryngologie, Helsingfors, 1926, pp. 15-16.

Ringertz, N.: Pathology of Malignant Tumors Arising in the



Nasal and Paranasal Cavities and Maxilla, Mercators Tryckeri, Helsingfors, 1938, pp. 31-42.

Stout, A. P.: Human Cancer, Lea and Febiger, Phila., 1932, pp. 722-723.

### Malignant Melanoma of the Anal Canal

*History* (presented by Lauren V. Ackerman, M.D., St. Louis).—This 72 year old white woman complained of intermittent constipation for one year, rectal bleeding for three months, and a rectal mass for two months that prolapsed with each bowel movement. Examination showed a rounded, firm tumor just within the sphincter which had a broad base and apparently was fixed to the deep structures. Local excision was performed and it was noted that tumor tissue was transected in the process. The specimen showed a circumscribed, homogeneous, dull white tumor partially covered by rectal mucosa. The latter presented multiple superficial erosions. The transected base of the tumor measured 3 cm. in circumference.

ARTHUR PURDY STOUT, M.D.: *Microscopic Descriptions* (Fig. 4): This tumor is composed of sharply defined cords with generally rounded and markedly vacuolated tumor cells. The cords are separated one from the other by fibrous strands. The vacuolation is probably a phenomenon of degeneration since in some areas it is absent. Mitoses are uncommon, averaging (in my section) one in every five or six high power fields. No pigment or other differentiating features are detected by me. The tumor has invaded and destroyed the mucosa so that its surface is superficially ulcerated.

*Comment*.—This tumor has all the characteristics of a malignant melanoma. The morphologic picture of the tumor growing in solid cords of rounded cells and originating at the junction of squamous and glandular epithelium is sufficient to warrant the diagnosis even though this section fails to show any brown granular pigment. I did not consider seriously any other diagnosis here. I did not think that it was a reticulum cell sarcoma because of the fashion in which it grows in cords separated by delicate fibrous strands. The malignant lymphoid tumors grow in great solid masses except where they are infiltrating surrounding tissue. I did not think it was a primary carcinoma of the rectum; if it is, I never saw another like it. Without any definite melanin I do not suppose one can regard that point as proved but, certainly, to me, it would be an entirely new variety of carcinoma of the rectum. In regard to chordoma, I did not think in spite of the vacuolation apparent in these cells that they looked like the physaliferous cells characterizing the chordoma. This tumor showed no fixation to the sacrum posteriorly, and I would not expect a chordoma to arise and invade the rectum without fixation posteriorly to bone. Finally, I did not think that these cells looked like carcinoid cells; they do not have granular cytoplasm which is a characteristic of the carcinoid cells.

Now, referring again to malignant melanomas, these tumors unquestionably start from the melanoblasts which are present in the ectodermal squamous epithelium of the anal canal. It is probably the action of the sphincter muscle which deter-

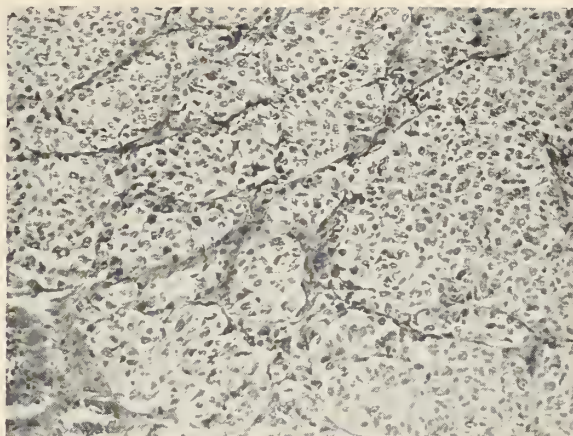


Fig. 4. Masses of rounded melanoblasts separated by strands of connective tissue. Magnified 260 times.

mines the growth chiefly upward into the ampulla of the rectum so that they always appear to be rectal tumors. So far as I know there are no melanoblasts in the alimentary tract except in the ectodermal squamous mucosa of the anal canal and anterior two thirds of the mouth and pharynx. Primary malignant melanomas start in these areas but, in my opinion, the so-called primary malignant melanomas reported arising between these two extremities (intestine, stomach and elsewhere) are not primary but metastases from an occult malignant melanoma elsewhere if none is apparent. The ability of these undiscovered primary malignant melanomas to metastasize is firmly established and familiar to all.

### DISCUSSION

DR. STOUT: We have at least thirty cases of metastatic malignant melanoma in which the primary lesion was never discovered. Several of them were autopsied; in one that I remember vividly the patient had eight moles on his body and the metastases appeared in the axillary lymph nodes. The surgeon who treated the case removed the nearest mole when he did the axillary dissection and that showed no evidence of malignant change. Thereupon, he took off all the rest of the moles on the body. I sectioned every one, and none showed any malignant change. One may say, perhaps, that axillary metastases may have come from an occult tumor inside the chest, but I have never seen a primary malignant melanoma inside the thoracic cavity. I have seen metastases there, but not a primary. So in other situations, for instance in the parotid lymph nodes, I have cases in which no primary malignant melanoma was found. Therefore I am forced to believe that malignant melanoma can arise without the primary site ever being discovered or ever manifesting itself so that it can be detected. These malignant melanomas of the anal canal growing up into the ampulla of the rectum are always fatal; I have never known of a case that was not.

DR. HALFERT: It is a surprise to me that you believe that malignant melanomas occur only where ectoderm meets mesoderm, and not also where endoderm meets mesoderm. It is true that those which arise in the gastrointestinal tract or in the biliary system are extremely rare, but such cases have been described. I have seen



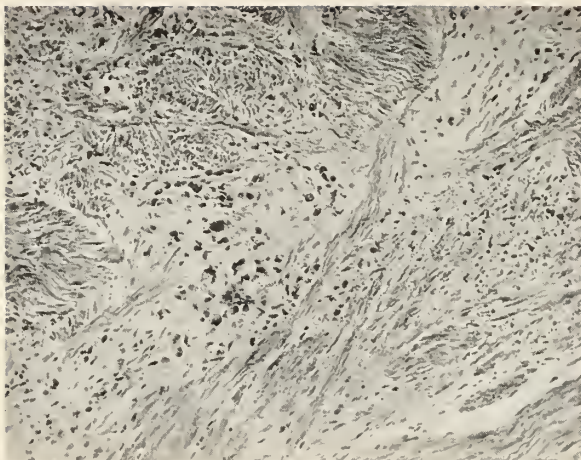


Fig. 5. Invasion of the muscular wall of the rectum by carcinoma cells appearing as isolated units or short cords surrounded by fibroblastic tissue. Magnified 260 times.

one which arose in the suprarenal gland. It, of course, is an example of one where ectoderm meets mesoderm. If it is true that they cannot arise along the line of entoderm touching mesoderm, that is interesting.

DR. STOUT: I am familiar with the reported cases from the gastrointestinal tract, including its accessory glands and structures like the extrahepatic biliary system. I know that there are such cases reported. But so far as I know, no proof has ever been offered that melanoblasts normally are found in those situations. Some two years ago there was held at the New York Academy of Sciences a symposium on melanomas and melanin formation in the body. Perhaps some of you have seen the volume of "Proceedings of the New York Academy of Sciences" containing that symposium. If you have not, I recommend it to you as a mine of information about melanin and melanomas. At that meeting I was a discussor of Masson's paper, and I asked him what he thought about the origin of these so-called primary malignant melanomas in the gastrointestinal tract. He acknowledged that he did not know of the existence of any melanoblasts in such situations, but he hesitated to say that it was impossible for such tumors to be primary in those situations. Of course, if one wants to invoke the melanoblasts that possibly can arise from Schwann cells, then one can use that argument for the development of malignant melanomas primary in any part of the body, because Schwann cells are almost universally found outside of the central nervous system. I do not know how it would be possible to prove that point. I certainly would agree that malignant melanomas do occur in solitary form occasionally in the gastrointestinal tract and that no primary lesion elsewhere in the body is discovered. But I still would reserve the privilege of saying that that does not prove that they are primary in those sites.

DR. SEVERANCE: I found some brown pigment in a few areas in the cells that I did not think was blood pigment.

DR. STOUT: You thought it was melanin? That supports the diagnosis of malignant melanoma. I think the configuration of the growth is greatly in favor of that diagnosis.

#### BIBLIOGRAPHY

P. Masson: Pigment Cells in Man, pp. 15-51: The Biology of Melanomas. Special Publication of the New York Academy of Sciences, vol. 4, 1948.

## Carcinoma of the Rectum (Metastatic ?)

*History* (presented by Richard E. Johnson, M.D., Columbia).—This 47 year old white woman gave a five months' history of intermittent constipation and diarrhea. She had observed no rectal bleeding. The patient had lost 70 pounds in weight during the preceding one and one half years. Seven years previous to admission, following stillbirth, she had undergone hysterectomy. Examination revealed an annular constriction of the rectum, within reach of the examining finger. There was some fixation of the posterior vaginal wall, but the cervical stump was normal. Blood Kahn and Frei skin tests were negative. An abdominoperineal resection was performed in two stages. The section is from the area of stenosis. The patient was last observed four months following operation; she had regained some weight and had no complaints.

DR. JOHNSON: The gross specimen showed a rather well circumscribed zone of dense fibrosis of the entire bowel wall with a pebbly surface. The mucosa, while perhaps superficially ulcerated, was for the most part intact and fixed to the underlying mucosa. The fibrosis extended into the perirectal fat. In dissection of the mesentery thirty lymph nodes were found, six of which contained tumor.

DR. STOUT: The mucous membrane in the section which I received appears to be intact and not involved by tumor, but I gather from the gross description that it was probably involved by tumor in some areas.

DR. JOHNSON: Yes, it was, but in none of the sections was it completely destroyed.

ARTHUR PURDY STOUT, M.D.: *Microscopic Description* (Fig. 5).—The submucosa and subserosa are thickened by fibrous tissue and the muscularis also is thickened by fibrous strands separating the muscle bundles. Scattered through the fibrous tissue wherever it is found are widely separated carcinoma cells appearing usually as units but occasionally as small groups of four to six cells. No attempt at tube formation is detected. The cells have darker nuclei with small nucleoli but few mitoses, and are usually inconspicuous. Some cells are vacuolated but signet ring forms are not easy to find in this hematoxylin-eosin stain. Tumor cells are found in lymphatics and the perineural sheaths, but none is seen in blood vessels.

*Comment.*—The appearance and disposition of this tumor bears a striking resemblance to the linitis plastica type of carcinoma of the stomach. That tumor form probably arises from heterotopic epithelial cells in the gastric wall because the mucosa is either not involved at all or seemingly only secondarily involved. In my entire experience with carcinoma of the rectum I have never observed a primary carcinoma of that type which failed to involve the mucosa, and the fact that other sections show that the musoca was not completely destroyed makes me think that this tumor probably did not arise in the mucous membrane of the rectum. I have seen the signet ring form of rectal carcinoma which spread in much this same fashion, sometimes upward in the lymph nodes, sometimes downward to form nodules in the skin around the anal margin, but always the rectal mucosa itself was involved. If, then, this section is characteristic of the entire



circumference of the involved rectum, I am forced to assume either that the tumor arose from heterotopic glandular epithelium in the rectal wall or that this represents metastatic involvement. I have twice observed the linitis plastica type of gastric carcinoma produce obstructive constricting metastases in the intestine, so I would be inclined to suspect the stomach as a possible source in this case. Failing that, I do not have any reasonable ideas other than to envisage a possible origin from any organ capable of forming mucus-secreting epithelial tumor cells. Perhaps I ought to add that I am not familiar with heterotopic epithelium in the wall of the rectum except in cases of endometriosis. This patient is a female, and although I searched carefully, I saw no evidence of endometriosis.

## DISCUSSION

DR. HALPERT: In the slide which I examined there were some neoplastic cells on the surface of the mucosa, so I believe the growth arose from the rectum.

DR. STOUT: At that point where they were on the surface was the mucous membrane entirely destroyed?

DR. HALPERT: No, it was partly intact.

DR. STOUT: There were still some remnants of normal mucous membrane and the cells came to the surface. Do you regard that as evidence that the tumor started in the mucous membrane?

DR. HALPERT: When the mucosa is involved one cannot tell whether a tumor is coming from or going in the direction of the mucosa.

DR. STOUT: I agree, but I would think that if it started there and was going away it at least ought to have destroyed the full thickness of the mucous membrane at some point. My understanding is that this patient has been examined and shows no evidence of gastric involvement or any other involvement.

DR. MODLIN: At operation—and before—it was quite difficult to determine the course that should be followed because repeated proctoscopic biopsies had been negative. At operation, the adhesions following previous surgery made exploration quite difficult. However, a thorough abdominal exploration was done and no evidence of another primary tumor was found. Since this was an obstructed colon, it was decided that an abdominoperineal resection should be done.

DR. STOUT: I certainly agree that the correct operation was done.

FREDERICK P. BORNSTEIN, M.D., *Herrin, Ill.*: Have you ever seen a signet ring carcinoma arising in the breast?

DR. STOUT: Yes, I have.

DR. BORNSTEIN: Is it not possible that this type of tumor may have arisen metastatically from the breast? Were the breasts examined in this case?

DR. MODLIN: Yes, they were.

DR. ECKERT: The fact that the surgeons did not find a carcinoma of the stomach still does not rule it out.

DR. STOUT: I agree.

DR. MODLIN: There is one point that is in favor of it not being there, however, and that is the fact that to this date, four months after resection, the patient is apparently well.

DR. STOUT: In a growth of this type with that number of metastases, it is my opinion that we shall hear from this cancer again, regardless of whether it is primary or secondary there.

DR. ECKERT: As a surgeon I would like to say that of all the organs of the abdomen in which the primary is

likely to be missed, probably the stomach is first, and the pancreas second. I might also say that within the last month I had an opportunity to see a case of a primary lesion of the stomach which had remained obscure for more than two years with an obstructing lesion of the sigmoid colon as the only primary evidence of disease.

DR. STOUT: In that case it was thought that the stomach was definitely the primary lesion and the colon secondary?

DR. ECKERT: The stomach was the primary lesion, but clinically there had never been any evidence of a primary gastric lesion.

DR. STOUT: In our own experience we have had two cases; they differed from this case however in that the stomach lesion was evident and was operated on first. Both of them were the linitis plastica type of cancer, and both of the patients developed metastases, one in the ileum and the other in the colon, and both metastases produced constricting, fibrous types of involvement that resulted in intestinal obstruction. They were secondarily operated upon and the area of obstructed intestine removed. The type of involvement closely resembled this. Possibly I have been unduly influenced by those cases, but I still think that there is a good possibility that this is a metastatic lesion. However, I cannot deny that it may be a primary lesion. Were you a primary exponent, Dr. Ackerman?

DR. ACKERMAN: Yes, I was, and I would like to argue a little! There have been two cases like this at this hospital; both of them were similar and it was difficult to obtain a positive biopsy. The first case was in a young man about 25 with carcinoma of the rectum, which is not too unusual in a patient of that age. I also have seen several instance in which metastatic foci encircled the bowel and were mistaken roentgenologically and clinically for a primary lesion and in which the primary lesion was usually either in the stomach or in the pancreas. But it would seem to me that if there was a metastatic process of this extent involving the rectum, at the time of exploration it would seem likely that there would be other implants on the surface. You would have to say that this was the only metastasis, and this would be an unusual manifestation for a single metastasis. This, to me, is an unusual form of primary carcinoma of the large bowel. When this case appeared I tried to find some other information, but there is little in the literature although, fairly recently, the Mayo Clinic reported some cases of somewhat similar nature which they felt were primary, and in which they had no evidence that they were metastatic. If they arise from heterotopic glands in the rectal mucosa, what are those glands?

DR. STOUT: I do not know.

DR. HALPERT: I am inclined to agree with Dr. Ackerman that the growth is primary in the rectum. This kind of carcinoma has been described in the stomach as producing no grossly visible lesion in the mucosa. This could be the case in this instance in the rectum. Also, as Dr. Ackerman mentioned, if it had been primary in the stomach, probably peritoneal seeding would have occurred and probably a rectal shelf would have been felt. I do not know whether a shelf was felt.

DR. STOUT: That was my other alternative. I said that it was either a metastatic lesion or, if primary here, that it must be comparable to the linitis plastica carcinoma in the stomach and comes from some glands or some epithelium heterotopic in the wall. In that part of the rectum I do not know what that epithelium would be. I think we get about 80 or 100 cancers of the rectum

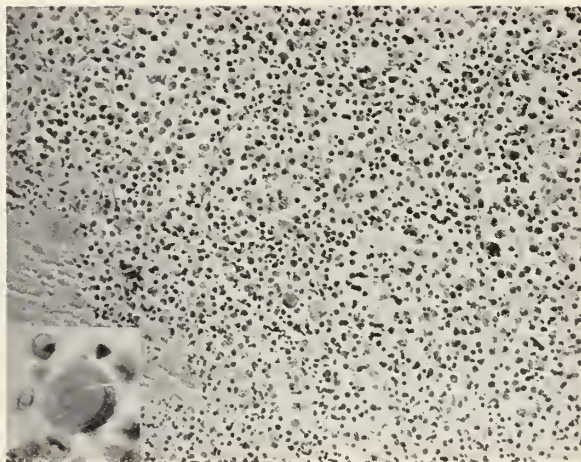


Fig. 6. The photomicrograph shows the granulomatous appearance of the lung lesion with inflammatory and phagocytic cells of all types. Magnified 260 times. In the lower left corner the inset shows one of the large cytoplasmic inclusion bodies, the nature of which is not recognized. Magnified 1240 times.

a year, and I have never seen one exactly like this. So in my experience this is an unusual type of rectal carcinoma.

I conclude that we cannot reach any definite agreement about this; it is either primary or metastatic, and if the patient dies from this cancer, as I suspect that she will, we must hope that an autopsy will enlighten us as to its nature.

#### BIBLIOGRAPHY

Karstens, H. C., and Bargaen, J. A.: Carcinoma of the Colon Simulating Linitis Plastica. Staff Meet. Mayo Clin. 22:231-236, 1947.

### Granuloma of the Lung

*History* (presented by Lauren V. Ackerman, M.D., St. Louis).—This patient was a white man, 21 years old, who had signs and symptoms suggesting bronchiectasis of the right middle, lower, and left lower lobes. These had been present for six months and included productive cough without hemoptysis and a weight loss of ten pounds. There had been intermittent chills and fever with signs of consolidation at the left base. The left lower lobe was removed. In the gross specimen, near the diaphragmatic surface, there were two flat, slightly raised and slightly yellow nodules measuring from 8 to 10 cm. in diameter. They presented apparent areas of necrosis and had indefinite margins merging with the lung parenchyma.

ARTHUR PURDY STOUT, M.D.: *Microscopic Description* (Fig. 6).—This nodule in the lung is quite sharply circumscribed. It seems to be due to a tremendous outpouring of phagocytic cells which have filled the alveoli and have in several areas produced focal necrosis. The individual cells vary greatly in size, with some multinucleate giant forms. Some cells are quite hyperchromatic with large nucleoli but these are in the minority. A few of the large cells have large cytoplasmic inclusions. They are purplish, ovate or rounded, and homogeneous except that in some there is a vaguely suggested central nucleus. Examination with polarized light is negative.

*Comment.*—This lesion appears to me to be an inflammatory granulomatous process and not neo-

plastic. The somewhat hyperchromatic cells in the alveoli and elsewhere might be taken for neoplastic reticulum cells in spite of the fact that some of them have phagocytized blood pigment, but I do not believe that they are anything more than alveolar phagocytes which sometimes assume this aspect. Nor do I believe the multinucleate forms are Reed cells; in an unusual situation such as the lung, it is usually better not to entertain a diagnosis of Hodgkin's disease unless the whole picture is characteristic, including especially the Reed cells, or unless there is proved Hodgkin's disease in other parts of the body. Of great interest are the large cytoplasmic inclusions. They do not conform to any of the parasites or their ova with which I am acquainted. If they are inspired foreign bodies I am still unable to recognize their nature. Whether or not they have played an important etiologic role in the causation of this granuloma, I am unable to say.

There is a peculiar localized granulomatous process which forms in the mediastinum where clinically it is often indistinguishable from benign neurogenous tumors and I have observed one example of it forming a mass which projected into a main branch bronchus, obstructing it, and extending into the adjacent lung parenchyma. This is characterized by the presence of many phagocytes containing lipid in a fibrous and granulomatous matrix. It is quite different from localized lipid pneumonia since the phagocytes are not in the alveoli. But obviously this case has nothing to do with that specific lesion which, when it occurs in the retroperitoneum, has been called xanthogranuloma by Oberling. I have to confess that I am unable to classify the nature of this granulomatous process in the lung which is under consideration.

#### DISCUSSION

DR. ACKERMAN: This case gave me a tremendous amount of difficulty. I felt that it was not metastatic carcinoma. The patient was examined carefully for any evidence of a primary tumor and is still perfectly well without any evidence of a primary. Since the first operation he has had removal of another portion of the lung for bronchiectasis. These slides also were studied by Dr. Parker Beamer who is interested in those little things that get inside cells that might be parasites, and he said it did not resemble anything that he had ever seen. The diagnosis of Hodgkin's disease I discarded, and the regional lymph nodes showed no evidence of Hodgkin's disease. I was then left with the same diagnosis as Dr. Stout, that it was an inflammatory process. Peripheral lymph nodes, spleen and liver did not contribute anything to this diagnosis. The clinical course of this patient has been that of a benign process, so I think that the majority of the clinical evidence is in that favor.

DR. HALPERT: I thought it was Hodgkin's disease, but I made that diagnosis with a great deal of hesitation. There were, on one side of the section, large foam cells which suggested that it was a form of lipid pneumonia. But the areas of necrosis and the amount of connective tissue, together with the presence of atypical giant cells which did not look exactly like giant cells of the



foreign body type nor like giant cells of the Langhans' type, led me finally to think that it was a granulomatous lesion and if not Hodgkin's disease, a good imitation of it.

DR. STOUT: How did you explain those peculiar inclusion bodies?

DR. HALPERT: I did not see them.

DR. STOUT: They were a great puzzle to me. I showed the section around but, like Dr. Ackerman, I could not get any lead to enlighten me.

DR. SEVERANCE: Like the previous speaker, I did not see those inclusion bodies either, but I did see the pigment and tried to make a diagnosis of malignant melanoma. I could not make a diagnosis of Hodgkin's disease and, in fact, I did not know what it was!

DR. WHELOCK: In the Brigham Hospital in Boston a diagnosis of Hodgkin's disease was made on the lung of a physician who was operated on about 1936 or 1937, and he was still alive in 1942. Periodically every two or three years the slides were reviewed by most of the men and their diagnoses remained unchanged. I happened to be on the Hodgkin's side myself and also did not pay too much attention to the inclusion bodies in this case. Was the fat stain positive?

DR. ACKERMAN: It showed only a moderate amount. I had hoped that a fat stain would be of value, but it was not.

A. E. MARGULIS, M.D., *Santa Fe, New Mexico*: What was this patient's occupation?

DR. ACKERMAN: I do not know.

W. E. B. HALL, M.D., *St. Louis*: Were any cultures made on this material?

DR. ACKERMAN: I cannot answer that.

J. O. BOLEY, M.D., *Kansas City, Kan.*: What kind of material had been instilled into these bronchi by doctors previously?

DR. ACKERMAN: The only material we know of is Lipiodol.

DR. STOUT: Those things did not come from Lipiodol, unless they had some special brand of Lipiodol. I think that one should make a reserved diagnosis of Hodgkin's disease of the stomach, spleen, intestinal tract or lung, unless it is absolutely characteristic or unless it can be supported by evidence of Hodgkin's disease elsewhere in the body. For instance, in Hodgkin's disease of the stomach, until about eighteen months ago I had never seen any case involving the stomach that I could recognize as such. Then, in the same year there came along two cases which seemed to me to warrant the tentative diagnosis of Hodgkin's disease. Both had most of the characteristics, with a solitary lesion in the stomach making a rather bulky mass grossly suggesting lymphosarcoma. Both had resections but, so far as I am aware, neither as yet has shown evidence of Hodgkin's disease elsewhere, so I am still uncertain whether or not the diagnosis was correct. The spleen is another place where Hodgkin's disease is extremely difficult to diagnose unless one can get some support from evidence in other parts of the body, for the spleen is an organ designed for the confusion of the pathologist. It contains cells that simply delight in imitating the appearance of other kinds of cells. I am always worried about the diagnoses that I make on the spleen unless it is something perfectly obvious.

DR. TRIBBY: It might be of interest to mention that I have seen one case of primary Hodgkin's disease of the brain, diagnosed by Dr. Warren. I think Dr. Adams of the Boston City Hospital reported a case of primary Hodgkin's disease of the brain with autopsy which

showed no other evidence of Hodgkin's disease in the body.

DR. STOUT: No bone involvement, either?

DR. TRIBBY: Apparently not.

DR. STOUT: I wish there were a specific test that would enable one to make a diagnosis of Hodgkin's disease.

DR. TAFT: Is there any possibility that these inclusion bodies might be pollen granules?

DR. STOUT: I could believe that they might be some kind of vegetable material, but I am no expert on pollen.

## Plexiform Neurofibroma of Back

*History* (Presented by Warren Winn, M.D., Boonville, Mo.).—This patient was an 18 year old white man who complained of pain in the dorsal region of the back at the site of an operative scar. When he was 12 years of age, a subcutaneous tumor had been excised from the midline of the back and a histologic diagnosis of lymph-angio-lipoma was made. He had had no further difficulty until six months prior to examination when he first noted pain in the region of the scar, exaggerated by heavy lifting. Examination revealed a poorly defined tumefaction beneath the operative scar, which was firm and somewhat rubbery in consistency and apparently compressible. A wide excision including the superficial lumbar fascia was performed. The gross specimen showed numerous discrete but nonencapsulated nodules and cords of white rubbery tissue ramifying through normal subcutaneous fat. The cut surface of each nodule bulged markedly. There were no areas of denegeration or cyst formation.

ARTHUR PURDY STOUT, M.D., *Microscopic Description* (Fig. 7.).—This tumor is made up in part of enormously swollen and tortuous nerves and in part of a diffuse proliferation of Schwann cells and connective tissue fibers seen to best advantage where it has infiltrated between some of the widely separated epithelial elements of the corium, and where it had infiltrated between the fat cells of the subcutaneous tissue. The unit of this growth is a thickened Schwannian sheath which is sometimes inhabited by an axis cylinder, as the Cajal impregnation shows. You have not seen that stain, but I have and I can tell you that there were neurites in some of those thickened Schwannian sheaths. Others did not have any neurites. Part of the thickening is due to collagen and reticulin. In the enlarged nerves much of the increase in size is due to edema.

*Comment.*—This is a characteristic plexiform neurofibroma with associated neurofibromatous proliferation outside of the enormously thickened tortuous nerves. So far as I am aware, this association occurs only in von Recklinghausen's disease and whether or not this patient shows any of the other stigmata, I would make that diagnosis in this case. I presume that the diagnosis previously made of lymphangio-lipoma was probably in error; for those not familiar with neurofibromatosis it is a mistake easily made. The predominant cell in this lesion is the Schwann cell; it is seen proliferating to produce new Schwann sheaths, some of which are inhabited by neurites both inside and outside of the perineurium and epineurium, and also outside of the epineurium proliferating in an independent

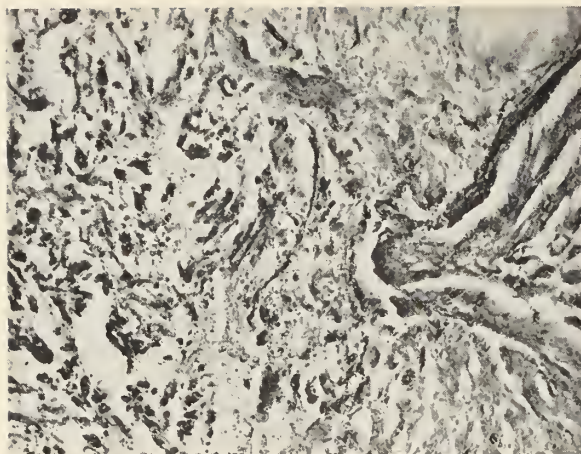


Fig. 7. Photomicrograph of a Cajal impregnation of one of the plexiform neurofibromas showing a single blackened axis cylinder within a field of proliferated Schwann cells. Magnified 260 times.

fashion in the corium. A good many connective tissue fibers are formed in association with the Schwannian cell growth. As a result of Margaret Murray's tissue culture studies which have shown that Schwann cells can produce reticulin fibers in vitro and that explantation of neurofibromatous tissue results in Schwann cell proliferation almost to the exclusion of all other cells, I believe that most of the connective tissue fibers in the neurofibroma are formed by Schwann cells. It is known that in neurofibromas various other tissues are sometimes formed—differentiated tactile corpuscles of the Wagner-Meissner and Pacinian types, striated muscle, bone, cartilage, and fat have all been found in neurofibromas. About half of the malignant neurogenous tumors develop in individuals with pre-existing neurofibromatosis. These are usually malignant Schwann cell growths but occasionally may be neuro-epitheliomas.

#### DISCUSSION

DR. STOUT: I do not believe this is a plain fibroma because the predominating cells are Schwannian, and there are nerve fibers in some of the groups of cells. I do not believe that it is a neurilemoma or Schwannoma because it is not an encapsulated growth. So far as I know, all of the neurilemmomas are encapsulated tumors. I do not think it is a desmoid, because I believe it is a neurogenous growth. Nor do I believe it is an amputation neuroma, because the Schwannian elements grow diffusely through the connective tissue outside of the nerves. In the amputation or traumatic neuromas, small groups of nerve fibers with their Schwannian sheaths grow in various directions, not as diffuse proliferations but as proliferations of small bundles of nerves in their sheaths. I do not think this is a chordoma because there are no physaliferous cells. In fact, I do not think it is a malignant tumor at all.

DR. WHELOCK: My diagnosis was neurofibroma, histologically nonmalignant and clinically malignant, and I made that diagnosis on the basis of its recurrence; one may assume that there will be more. I do not know that the histologic picture will change. We had a number of these recently in Chicago. Probably Dr. Acker-

man recalls one that I showed him when he visited there which eventually required amputation of the foot. I would like to know from you, Dr. Stout, if there are any good basic ways of determining whether these are non-malignant on the basis of the histologic picture. Some of them are invading the adjacent tissues so diffusely at the time of operation that it is difficult for the surgeon to remove all of the lesion, yet histologically there is no evidence of microscopic malignancy.

DR. STOUT: There are some neurofibromas that are so large it is impossible or inadvisable for the surgeon to attempt to remove the entire growth at once and, following partial removal, the Schwannian elements may grow further as a local proliferation. In my experience, as long as the cells have remained as well differentiated and as closely resembling the appearance of ordinary Schwann cells as they are here, they do not do anything more than grow locally, invading and extending in the skin and subcutaneous tissue but not deeply. The cases that have been malignant have been histologically different, and clinically they have been malignant in one of two ways: either they grow up along a nerve toward the spinal cord, unchecked by anything which you do to try to prevent them, eventually involving the cord and killing as a result of the developing paraplegia, or else they metastasize. Both kinds are equally fatal, and equally difficult to cure.

#### BIBLIOGRAPHY

- Murray, M. R., and Stout, A. P.: Demonstration of the Formation of Reticulin by Schwannian Cells in Vitro, *Am. J. Path.* 18:585-593, 1942.  
Stout, A. P.: Neurofibroma and Neurilemoma, *Clin. Proc.* 5:1-12, 1946.  
Stout, A. P.: Tumores del Sistema Nervioso Periferico, *Arch. Soc. Argent. Anat. Norm. y Pat.* 8:551-562, 1946.

#### Thymoma in a Case of Myasthenia Gravis

*History* (presented by Lauren V. Ackerman, M.D., St. Louis).—For six weeks previous to admission, this 41 year old white woman had noticed weakness of the masticatory muscles when chewing. In addition, she experienced profound fatigue after minimal exertion, as well as intermittent diplopia. The clinical diagnosis was myasthenia gravis. The thymus was removed. It contained an apparently encapsulated mass, of which the slide is a complete section.

ARTHUR PURDY STOUT, M.D.: *Microscopic Description* (Fig. 8).—This tumor is composed of large and small, irregularly rounded, closely packed aggregations of "reticulum" cells sometimes outlined by lymphocytes but often only contained within a fibrous band. Fibrous prolongations extend into the masses bearing capillaries. Rarely lymphocytes intermingle as units among the larger paler cells. No differentiated thymic tissue is recognized within the tumor but outside of its periphery traces of normal thymus with fat and Hassall's corpuscles are seen. One fragment of thymic tissue shows a proliferation of the large pale cells within it.

*Comment*.—Applying names to thymic tumors is an extremely difficult task because of the uncertainty of the derivation of the cells composing the thymus. It has been stated that the thymus is an organ composed entirely of lymphoid and reticulum cells and that Hassall's corpuscles are made up of metaplastic reticulum cells. It has, in contrast, been exploited as altogether a derivative of branchial epithelium and that the lymphocytes are metaplas-



tic epithelial cells and, finally, a dual origin of epithelium secondarily invaded by lymphocytes is probably the most popular hypothesis concerning its composition. Whatever the truth may be, its tumors have long provided a confusion of names and anyone attempting to codify them from a study of the literature finds himself lost in a trackless morass. I do not wish to discuss all the various forms of thymic tumors except to say that because of the uncertainties of cellular composition, it seems wiser to me to continue the use of the indeterminate label "thymoma" indicating by the proper adjective whether the tumor is benign or malignant.

At this time our particular interest is the variety of thymic tumors and hyperplasias found in myasthenia gravis. In the few cases studied at Columbia University these have all been composed of admixtures of lymphocytes and reticulum cells, sometimes as diffuse hyperplasias with Hassall's corpuscles and sometimes as tumor-like nodules, as in this present case, without Hassall's corpuscles. None of our cases has metastasized and only one was adherent to surrounding structures. Turning to the literature, Sloan has no malignant cases associated with myasthenia gravis from the Johns Hopkins' Hospital, Murray and McDonald of the Mayo Clinic reported upon thirteen proved cases of thymoma in myasthenia gravis. Two of these metastasized, one to the lung and diaphragm, and another showed multiple pleural seedings. A third case extended to the vena cava but without metastasis. They remark that there are no distinguishing characteristics which will enable one to anticipate malignancy in the thymomas associated with myasthenia gravis. On the other hand, Wilson and Pritchard in their discussion of the varieties of malignant thymoma have nothing to say about its occurrence in myasthenia gravis. I think it is fair to conclude that malignant thymoma in myasthenia gravis is a rare occurrence. In regard to the morphology of the present case, there is a greater preponderance of the large pale cells which, I presume, in spite of their resemblance to reticulum cells are really epithelial cells, than in any of our cases of thymoma at the Presbyterian Hospital. One might be tempted to use the term lympho-epithelioma in these cases because of the resemblance to the nasopharyngeal tumor of the same name. This seems to me to be unwise because this name has come to be associated with a malignant tumor. I presume, for reasons already stated, that this will prove to be benign but I could not undertake to guarantee it.

#### DISCUSSION

DR. STOUT: Now, the question arises, "What is a malignant thymoma? Is it a histologic picture, or must one depend upon the clinical course in order to make certain?" The truly malignant thymoma usually is not associated with myasthenia gravis. They look like purely malignant growths and in my experience they are rare tumors and are practically always fatal. I do not know of any patient who has survived a metastasizing thymoma. I have to agree with Murray and McDonald that in thymomas that are associated with myasthenia

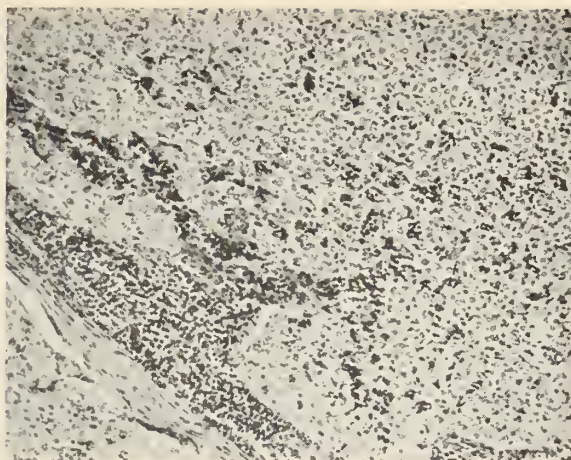


Fig. 8. Thymoma showing relationship of reticulum cells to lymphocytes. Magnified 260 times.

gravis, I do not know how to tell from the morphologic appearance which of the tumors will metastasize and which will not.

DR. HALPERT: The cells which apparently make up this neoplasm, in some fields particularly near blood vessels, are polygonal instead of round with the cell outlines clearly discernible. This would support the contention that these are epithelial cells.

DR. TAFT: I heard Dr. Castleman present a paper at the Massachusetts General Hospital about six months ago on their experience with thymomas. He expressed the opinion that when there were more large cells than lymphocytes, the tumor was usually malignant; if there were more lymphocytes than large cells, then it was probably benign.

DR. STOUT: That is a valuable observation of Dr. Castleman's if it can be confirmed. Histologically this case looks more like a possibly malignant tumor than any at our hospital that were associated with myasthenia gravis. Did Dr. Castleman make any statement about malignant thymomas in myasthenia gravis?

DR. TAFT: He had at least one such patient in his series.

DR. ACKERMAN: This case troubled me but, finally and reluctantly, I came to the conclusion that it was benign. Dr. Black and I have been looking over the tumors in our collection which have been designated as thymoma, and I am now in that morass that you were speaking of, Dr. Stout. I am sure that frequently in these cases there is a large number of other tumors that are not thymomas, such as primary bronchogenic carcinomas, Hodgkin's disease and lymphosarcomas, which are in the literature as primary thymic neoplasms. In this particular case I do not believe that it is possible to get the answer because the surgeon completely removed the tumor. It could be benign or malignant; we will never know.

DR. STOUT: I can add only that the two cases of malignant thymoma that I knew were malignant, were terribly malignant; they literally ate up the individuals. The first case I ever saw was in a Negro woman who had a sternum that bulged out tremendously because of the large mass behind it. That tumor had metastasized to the axillary lymph nodes and it was biopsied there. It was a tumor that featured large cells. There is a large cell form of malignant thymoma and, although I don't know what the nature of those large cells is, they are bizarre. Dr. Regato, how about the ir-

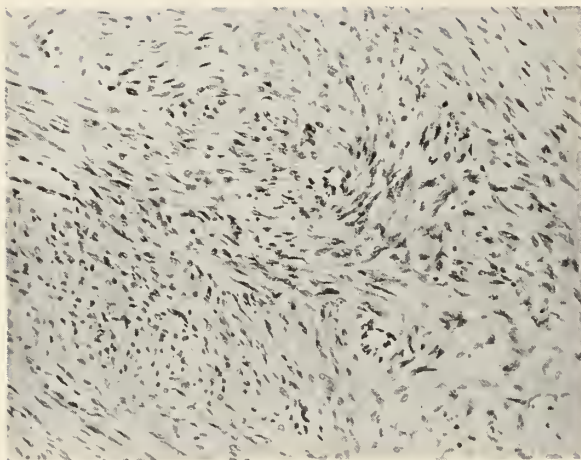


Fig. 9. Interlaced bands of fibroblastic tumor cells accompanied by abundant connective tissue fibers. Magnified 260 times.

radiation treatment of true thymomas? I do not mean Hodgkin's disease and lymphosarcoma of the thymus, but thymomas. Have you treated any?

JUAN A. DEL REGATO, M.D., *Columbia*: I could not give an opinion, since that would have to be based on experience. I am certain that in the treatment of some of these lesions radiotherapy is successful, but since we are at a loss to identify the malignant from the benign it is entirely futile to try to ascertain the effectiveness of the treatment. I have not treated any case of myasthenia gravis of the thymus by irradiation.

DR. STOUT: I conclude that the nature of the thymic tumors is still more or less of a mystery to all of us; they are all too rare.

#### BIBLIOGRAPHY

- Murray, N. A., and McDonald, J. R.: Tumors of the Thymus in Myasthenia Gravis, *Am. J. Clin. Path.* 15:87-94, 1945.  
Sloan, H. E., Jr.: The Thymus in Myasthenia Gravis, *Surg.* 13:154-174, 1943.  
Wilson, F. N., and Pritchard, J. E.: Malignant Thymoma, *Canadian M. A. J.* 53:444-454, 1945.

### Fibrosarcoma of Cicatrix of Thoracic Wall

*History* (presented by Richard E. Johnson, M.D., *Columbia*).—This 31 year old white woman complained of a mass in the left supraclavicular fossa which had been present for four months and which had shown no change in size since she had first noticed it. Eleven years ago the patient had had pulmonary tuberculosis involving the left lung. A pneumothorax was maintained for three years, at which time a left phrenicectomy was performed. Four years previous to admission, there was an exacerbation of her disease and a three stage thoracoplasty on the left side was performed. For the last three years there had been no evidence of activity of the disease and sputum specimens were persistently negative. Examination revealed a smooth, fixed mass in the left supraclavicular fossa, 6 cm. in diameter. This was present just lateral to a 1.5 cm. scar of the phrenicectomy. Except for the deformity due to the thoracoplasty, the remainder of the physical examination was within normal limits. X-rays gave no additional information. At operation, it was necessary to divide the clavicle in order to expose the tumor. It was attached to the posterior chest wall in the region of the thoracoplasty scar. A line of cleavage was demonstrable everywhere except at its point of attachment. Grossly, the tumor was firm and somewhat rubbery in consistency. The cut surface was bulging and

grayish pink in color, with many areas of recent hemorrhage. It measured 12 by 11 by 6 cm. The base was 5 cm. in diameter. The line of excision appeared to pass through tumor. The section is from the base.

ARTHUR PURDY STOUT, M.D.: *Microscopic Description* (Fig. 9).—The sections show a tumor made up of differentiated fibroblasts largely spindle shaped but occasionally stellate, which grow in bundles accompanied by many collagen and reticulin fibers which both surround the cells and also run parallel with the long axis of the bundles. Mitoses are extremely rare, no nerve fibers are detected in the Cajal preparation and the sections stained for fat show none in the cells—or at least I could see none. It is always dangerous to make any categorical statement about fat stains.

*Comment*.—Obviously this is an extremely well-differentiated fibrous growth and one from which one would expect no metastases. It is a fibroblastic tumor showing nothing which suggests an origin from Schwann cells. Presumably it has developed from cicatricial tissue but it shows none of the characteristics of a true keloid. Although clinically circumscribed, there is a microscopic infiltration into the surrounding fat. There are at least three interpretations which can be made of this growth. It can be considered as an hypertrophied cicatrix similar to the desmoid tumor which forms in the abdominal muscles of women, most of whom have been through pregnancies. It can be called a fibroma, or it can be considered a well differentiated, nonmetastasizing fibrosarcoma. I cannot offer accurate histopathologic data to support my reasoning since it is based largely upon the reported clinical and pathologic experience of others, integrated with my own. The term desmoid tumor has come to be applied especially to the scarlike tumors of the abdominal wall musculature and I believe one should reserve the term solely to that lesion because it seems to exhibit self-limitation of growth and, even if excision comes close to the lesion, it does not, in my experience, recur. There is no accurate way to distinguish histologically between fibroma and fibrosarcoma so that, as suggested by Wilson, one has to be governed by whether or not the lesion grows to a large size and is persistent in growth. This may seem an unsatisfactory basis for distinction in terms, but there is good clinical reason for it. The small tumors do not recur if casually excised but the larger tumors do in a high percentage of cases, and persistently recurring tumors of this sort may actually kill if repeated efforts fail to get the whole growth. Lesions such as the present one are found in the mesentery, attached to the peritoneum, and in the skin as well as in scars. I have chosen to classify them as well differentiated fibrosarcomas because of this fact of persistent destructive growth and because the terms desmoid, hypertrophy of scar, and fibroma are all associated usually with a conception of benignancy and harmlessness which is unjustified. All of these tumors are radioresistant and the only well differentiated fibrosarcoma completely destroyed by roentgen-



therapy about which I know occurred in the supraclavicular region of a young man. The dosages used in this case were so enormous that not only was the tumor destroyed but the clavicle and surrounding soft parts as well, necessitating an interscapulothoracic amputation. That is the way in which that tumor was gotten. We made many sections and it was actually completely destroyed. Such heroic therapy seems undesirable since it led to the exact operative procedure it was designed to avoid.

#### DISCUSSION

DR. STOUT: I think that after seeing the gross specimen and the microscopic evidence of infiltration, I would expect a persistent reappearance of this growth, and I believe it has already recurred.

DR. JOHNSON: At four months it reappeared.

DR. STOUT: Within four months the growth reappeared at the site of removal. An ordinary fibroma does not do that. Of course, if one calls this a fibroma, then a fibroma does do it! But that is the reason I do not wish to call it a fibroma, because I think it leads to a misconception of the clinical characteristics of infiltrative growth. I can well remember a case which I reported among others in my paper on fibrosarcomas in the journal *Cancer*. The patient had one of these tumors which started in the subcutaneous tissue of the abdominal wall. During twenty-five years, about eight attempts (all too timid) to remove it failed to get the whole tumor, and the man eventually died, after having had the tumor for twenty-five years, because it extended deeply to the peritoneum and posteriorly and upward. He got infection mixed up with extension and died.

DR. ACKERMAN: There was a similar tumor seen at the State Cancer Hospital which was located in the scapular region. Before the patient reached that hospital there had been seventeen previous excisions and we did the eighteenth. Another period of time elapsed and, finally, after several months a shadow appeared in the left lung which stayed there for two years. This finally disseminated, resulting in the death of the patient. It has been my experience with these lesions (when anyone gives one to me) to find out all that I can about the clinical data because I think this is another tumor which may appear to be quite well differentiated, and the presence or absence of invasion, together with the clinical characteristics often have to be combined to make a diagnosis of fibrosarcoma, which I also made in this case.

DR. STOUT: How about its radiosensitivity, Dr. Regato?

DR. REGATO: As a radiotherapist, I am not sorry that this patient was given surgical treatment. It is true that some fibrosarcomas will show some radiosensitivity, but it is my opinion that they should be treated surgically.

DR. STOUT: Occasionally I have encountered tumors of a fibrous nature in the antrum, and years ago one such tumor in a young child about 3 years old was diagnosed by me as a fibrosarcoma. It made the palate bulge downward into the mouth, expanding the antrum so that there was a deformity of the face. After biopsy and my diagnosis of fibrosarcoma, it was felt to be an inoperable case and just as a chance of doing something for the patient, radiotherapy was used. To our amazement, the child was cured. That is now eight or ten years ago. The child comes in, we see her growing up, she has of course some deformity of the face because of the considerable atrophy of the maxillary bone as

a result of the amount of radiotherapy she received, but she has no more growth. But the catch is that my diagnosis was wrong; it was not fibrosarcoma. It was fibrous dysplasia which I was too inexperienced to recognize in those days. So, except for the one case that I quoted in which such enormous doses were given that the surrounding soft tissues and bone as well as the tumor were actually destroyed, I know of no other case in which a true fibrosarcoma has been destroyed by radiotherapy. Therefore, I believe its reputation as a radioresistant tumor still stands firm.

DR. REGATO: I would like to say that they may be radiosensitive but not necessarily radiocurable.

DR. STOUT: I would like to leave one other thought with you about tumors of the soft parts. Before undertaking curative therapy, biopsy them and try to find out the nature of the tumor. Then, using your knowledge of how the different tumor types may be expected to behave, the type of therapy can be planned. I am sorry to say that that is a practice not often put into effect. Most surgeons attack the tumor with a clinical diagnosis alone; I do not care how experienced anyone is, he cannot make an accurate diagnosis clinically about the nature of these tumors.

#### BIBLIOGRAPHY

- Stout, A. P.: Fibrosarcoma, *Cancer* 1:30-63, 1948.  
Wilson, D. A.: Tumors of the Subcutaneous Tissue and Fascia, Surg., Gynec. & Obst. 80:500-508, 1945.

#### Kaposi's Disease

*History* (presented by John B. Frerichs, M.D., St. Louis).—Eleven months before his first hospitalization, this 70 year old white man noticed some small cystlike nodules on the inner aspect of the left foot. These lesions were painful and, when irritated by the shoe, bled severely. Salve and electric needle treatments by his physician gave only temporary benefit. One month before hospital admission, similar lesions began to appear on the inner aspect of the right foot. Physical examination showed temperature 99.2 F., pulse 84, respiration 22, blood pressure 180/88. There was pitting edema of the left leg and mild edema of the right. On the left leg, extending up to the knee, there were several macular and nodular, soft purplish lesions, measuring up to 1 cm. across and 0.3 cm. thick. Some of these were ulcerated and infected. Examination of the urine and blood revealed no abnormalities other than a persistent eosinophilia, as high as 8 per cent. After biopsy and compresses to the left leg, x-ray therapy was begun. While the treated lesions regressed in size (almost completely, ultimately), new ones persistently appeared in the treated areas, as well as beyond these areas (on the left thigh, groin and fingers). Another biopsy was taken on June 3, 1948, from the left knee. The section is from this tissue.

ARTHUR PURDY STOUT, M.D.: *Microscopic Description* (fig. 10).—The section shows that the epidermis is elevated and flattened by a nodule lying in the corium immediately beneath. This is composed of an admixture of capillaries distended with red blood cells and showing some tendency to anastomose, with bundles of elongated cells resembling those seen in a fibrosarcoma. The intertwining of the capillaries and fibrosarcoma-like cells is entirely characteristic of Kaposi's disease.

*Comment*.—Taken in conjunction with the history, this lesion can only be interpreted as Kaposi's

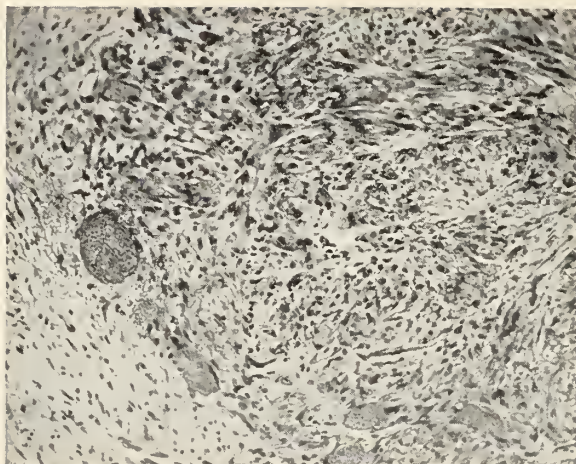


Fig. 10. The characteristic picture of Kaposi's disease: an intermixture of capillaries and fibrosarcoma-like tissue. Magnified 260 times.

disease, in my opinion. Indeed I am not acquainted with any other process which can produce the peculiar intermingling of fibrosarcoma-like tissue with capillaries and blood spaces seen in this section, so I think it would be reasonably safe to make the diagnosis on the slide alone. Whatever its nature may be, I think it is important to realize that Kaposi's disease is a serious condition which will cause death if the patient does not die of some intercurrent process. It is rather difficult to obtain accurate information about it because, when it develops in older people as is usually the case, it runs a long protracted course lasting years; and as these lesions are generally seen in dermatologic clinics which often are not well organized for following patients, many of them are lost track of. In the small number about which I have information, 50 per cent died of the disease. When it appears in the young it usually runs a much more rapid course. As Dörffel points out, it is a mistake to think that it is found chiefly in Jews—rather the distribution is more on a geographic basis with most of the cases originating in Russia, Poland and North Italy. But of course it has appeared in the nationals of other countries as well, including native-born Americans. Although it usually commences on the lower extremities, it is well to remember that it may first appear anywhere on the surface of the body including the oral, pharyngeal and rectal mucous membranes. It is well known, also, that almost any organ and tissue in the body may be involved. In spite of a large literature given over to sometimes fantastic speculation about this disease, we remain in a state of complete ignorance about it. It is not even known whether or not it is a neoplasm or whether or not the multiple lesions are in the nature of metastases or multiple primary involvement.

#### DISCUSSION

DR. STOUT: Some of these lesions have a good deal of hyperkeratosis on top of them; others do

not have so much and are more obviously vascular growths. I think that both varieties are characteristic of the lesions of Kaposi's disease. The photomicrograph brings out the dual nature of the lesions. It is so characteristic that I do not know of any other type of lesion which reproduces exactly the same picture.

JOHN B. FRERICHS, M.D., *St. Louis*: This man, since the time that this nodule was removed, has been x-rayed some more (I do not remember the precise figures but he has received heavy irradiation) and has kept on developing new lesions in the irradiated areas, although some older nodules regressed. Finally, for obscure reasons, he was given a course of nitrogen mustard at another hospital. That almost killed him and, after that, lesions blossomed out all over him. He now has them also on the penis, face, trunk and hands, whereas before they were almost entirely confined to the legs. We saw him last about three weeks ago. At that time he was suffering from episodes of high fever with shaking chills, was weak and showed mild disturbances in attention and orientation. While he did not give any definite evidence on physical examination of having any visceral involvement at that time, he looked like he was not likely to survive for a long time.

DR. STOUT: Did he have a large liver or spleen?

DR. FRERICHS: No, Sir.

DR. STOUT: Were the peripheral lymph nodes enlarged?

DR. FRERICHS: Only on his first admission. There were some enlarged nodes in the groin but there was also considerable ulceration of the skin of the foot, and the enlargement of the nodes was thought to be inflammatory. They diminished in size as the infection was successfully treated.

DR. BORNSTEIN: I made the diagnosis of Kaposi's disease in this case, but there is one question I would like to ask: inasmuch as many individual lesions show spontaneous regression, is it not sometimes difficult to differentiate those lesions from sclerosing hemangiomas, especially if the sclerosing hemangiomas are too much sclerosed?

DR. STOUT: Even without the aid of radiotherapy these lesions can regress spontaneously but, to my knowledge, I have never had the opportunity of examining the section of a lesion that had spontaneously regressed. I do not know whether or not it would resemble the lesion to which you refer as sclerosing hemangioma. I am familiar with the appearance of that lesion and I never had the thought of confusing it with Kaposi's disease. The capillaries of Kaposi's disease are all clearly defined and often anastomose one with another freely. In the so-called sclerosing hemangioma the capillaries are often quite difficult to identify because most of them are collapsed. They are seen best in the silver connective-tissue stain because that brings out the reticulin sheaths of the capillaries and one can then observe that there are a great many more capillaries than are really appreciated in the hema-



toxylin-eosin section. I do not think I ever saw a fibrous xanthoma (which is the name I use for sclerosing hemangioma) that had spindle-shaped cells in such a configuration that they looked like fibrosarcoma, so I do not think I would be tempted to mistake one for the other. However, I have made the error of calling Kaposi's disease a vascular leiomyosarcoma, I am ashamed to say. That was when the primary lesions developed in the oral cavity alone. It appeared first as a solitary lesion, in a woman about 85; later the lesions steadily increased in number, the surgeons kept removing more and more of them, and it took me quite some time to wake up to the fact that it could not be any ordinary kind of leiomyosarcoma. When I looked in the patient's mouth, I realized that it was certainly Kaposi's disease, for the lesions were characteristic indeed. It is important to remember that Kaposi's disease can appear in the mucous membranes when there are no skin lesions at all.

DR. HALPERT: Has this patient been followed as to examination of the stools for hemorrhage? Frequently these lesions involve the mucous membrane and massive hemorrhage may cause death.

DR. FRERICHS: The follow-up on this patient has been maintained and there has been no hemorrhage.

DR. STOUT: I would suspect that this patient has multiple visceral involvement, possibly including the gastrointestinal tract. I am going to make a statement now, Dr. Regato, and you can bat me down after I have made it! I do not understand what is accomplished by treating these lesions by radiotherapy because, while one can make the lesions disappear, one does not affect the course of the disease at all, so far as I know. The lesions go on appearing in new places just as if one had done nothing about them. I can understand treating them if they grow large enough or get ulcerated, but when a patient has a crop of nodules such as those on the side of the foot in this patient, I cannot see that one does the patient any particular good unless it is a psychologic effect. I do not believe that one is doing anything actually to control the disease.

DR. REGATO: Indeed, we accomplish as little by giving radiotherapy to these tumors as we do by pondering over their morphologic appearance!

DR. STOUT: Very good!

DR. REGATO: These lesions are radiosensitive and, perhaps, locally radiocurable. The apparent local recurrence that is sometimes noted may be real reinvasion from surrounding areas in a disease that appears to be multicentric. It has been my experience that nothing much is accomplished except that the lesions might be healed on the surface where they are about to ulcerate and become infected. The result of radiotherapy in the treatment of this disease is, unfortunately, only palliative.

DR. STOUT: Have you ever treated Kaposi's disease of the lung or gastrointestinal tract?

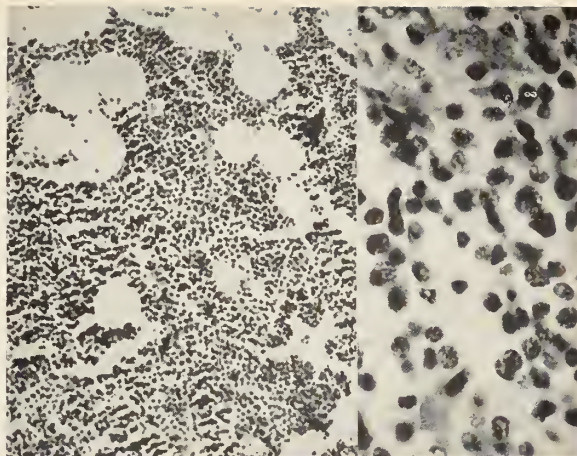


Fig. 11. At the left the massive solid masses of tumor cells have infiltrated the subcutaneous fat. Magnified 260 times. At the right, details of the tumor cells are shown. While most of the nuclei maintain the characteristic cartwheel appearance of the plasma cell, there is considerable variation in size and some cells are multinucleate. Magnified 1240 times.

DR. REGATO: No, sir. Those cases that I have seen were of the skin of the lower extremities.

DR. FRERICHS: I would like to ask if anyone present has ever heard of any good results from such cases being treated by nitrogen mustard?

DR. STOUT: I certainly never have; this is the first case I ever heard of which was so treated. I do not know of any background of experience for its use in such lesions. I suspect that in this instance nitrogen mustard was tried experimentally with the hope that the lesions might be favorably affected by it.

#### BIBLIOGRAPHY

- Dörffel (quoted by MacKee and Cipollaro). MacKee, G. M., and Cipollaro, A. C.: Idiopathic Multiple Hemorrhagic Sarcoma (Kaposi), *Am. J. Cancer* 26:1-28, 1936.  
Stout, A. P.: Sarcomas of the Soft Parts, *J. Missouri M. A.* 44:329-334, 1947.

#### Plasmocytoma of Inframammary Region

*History* (presented by John B. Frerichs, M.D., St. Louis).—When first seen, this 71 year old farmer complained of a red "spot" on the skin below the right nipple. It had been present for twenty days prior to admission, measured 0.6 cm. in diameter, was nonpainful and grew rapidly, measuring 2.5 by 0.5 cm. at the time of admission. No trauma had preceded its appearance. On physical examination the only finding was the lesion which was purplish-red in color and partially covered with a black crust. It was ringed by a zone of induration 1.5 cm. in width. X-rays of the skull, chest, shoulders, pelvis and thighs were normal. Laboratory findings were normal except for 6 per cent eosinophilia.

ARTHUR PURDY STOUT, M.D.: *Microscopic Description* (fig. 11).—The skin and subcutaneous tissue are infiltrated solidly by tumor cells which appear as rounded units without cohesion and with no evidence of intracellular or extracellular fiber formation of any kind. They vary in size from a little larger than a small lymphocyte to occasional giant forms with several nuclei. A few cells have a homogeneous dark pink to purplish pink cytoplasm and

an eccentrically placed nucleus with the "cart-wheel" arrangement of the nuclear material characteristic of the plasma cell. But the majority do not have these characteristics clearly defined so that one feels some hesitancy about their nature. This is especially true of the giant cells whose nuclei are quite undifferentiated. On the whole, however, these cells more nearly approximate the appearance of plasma cells than of any other type. Mitoses are uncommon.

*Comment.*—The problem here is to decide, first, whether or not this is a plasma cell tumor and, second, whether or not it is primary in this situation. In my opinion it should be classified with the plasma cell tumors because, although perhaps the majority of cells do not have the cartwheel nucleus characteristic of that cell, there are a sufficient number of them which do have it and experience with multiple myelomas of the bone marrow shows that in some of them a good many of the cells taken by themselves could not be recognized as plasma cells, while others in the same tumor are characteristic. If it is not a plasmocytoma or a nodule formed in the course of a plasma cell leukemia, I am not able to name its cellular origin. Since the work of Maximow seems to show that the plasma cell is a derivative of the small lymphocyte, we shall probably not be far from the truth in classifying this lesion at least in the lymphoblastoma group. Is plasmocytoma ever primary on the body surface? In the survey of extramedullary plasma cell tumors by Hellwig, he refers to two cases of plasma cell tumor, only one of which seems to be acceptable. This case reported by Aragona was in the neck of a 6 year old girl and had not recurred five years after excision. I am not acquainted with any other cases. I think one may accept this as a true neoplasm and not a granuloma. One can scarcely doubt that having heard the subsequent history. The plasma cell granulomas are composed of differentiated plasma cells collected into small groups with uninvolved tissue between them, whereas, the true plasma cell neoplasm is made up of solid sheets or masses of these cells. I do not question the possibility of the occurrence of extramedullary plasmocytoma. In this present case, I would look for further involvement of this patient either in the regional nodes or in the bone marrow, either as a solitary lesion or as multiple myeloma. In a recent study of primary plasma cell tumors of the upper air passages and oral cavity which I made with Kenney, we were astonished to find that the regional nodes and the bone marrow were almost the only other areas of the body affected.

DR. FRERICHs: The lesion on the chest was quite a red, elevated lesion with spontaneous, superficial ulceration. In the area on the thigh, which was the donor site of skin graft taken to cover the defect on the thoracic wall, there was a nodule off to one side which showed the same sort of tissue that the primary tumor did. The graft was not taken at

the time this lesion was excised. The local lesion was excised widely with a minimum border of about 3 or 4 cm., full thickness. Three weeks later grafts were cut from the thigh and applied to the granulating area. A short time after that there appeared the nodule at the edge of the grafted area; slightly later he began to develop, and is still developing at a rapid rate, numerous nodules in several of the donor sites from the leg. The first recurrence on the chest wall was treated with irradiation, went away and has not come back; however, since then he has developed one other tumor nodule around the periphery of the scar of the original excision.

The most confusing aspect of this case to me is that relatively recently the patient showed up with symptoms of nasal obstruction on the left side, with some bleeding; this rapidly progressed to the extent that the left side of his nose was bulged out, he could not breathe at all through this side, and complained of severe, gnawing pain in that area of his face. A large amount of tissue again was removed, principally from the nose; irradiation therapy was given to that area with excellent symptomatic results.

DR. STOUT: And x-rays of his skeleton?

DR. FRERICHs: X-rays of the skeleton have been done on two or three occasions and have never shown anything. The urine did not show any Bence-Jones protein, and studies of the marrow and peripheral blood have not shown anything felt to be a noteworthy abnormality by the hematology consultant.

DR. STOUT: This is certainly a case of extraordinary interest. I would be glad to hear of anybody's experience who has found a tumor like this primary in the skin.

DR. WHEELock: There is such a case in the records of the Pondville Hospital in Massachusetts, of a primary in the lower extremities in a man about 65 years of age. I do not believe that case was ever published.

DR. STOUT: They are evidently extremely rare. The interesting thing to know is whether these extramedullary developments are always part of a disease which will eventually manifest itself in bone marrow. I do not think so. The places where apparent extramedullary plasma cell tumors are most often seen are in the upper air passages, oral cavity and pharynx. A great many have been reported in the conjunctivae, but I think that almost all of those have not been true neoplastic plasmocytomas, but plasma cell granulomas. Also reported are sporadic cases involving the gastrointestinal tract. I have seen at least three of those, two in the small intestine and one in the lower rectum near the anus and, occasionally, other areas of involvement have been quoted. Now, in following the cases from the nasopharynx (which is the group in which I have a particular interest) there were some astonishing cases. Only one fourth of them later developed bone lesions, and about half of



those who developed bone lesions presented only a solitary one. The other half developed regular, multiple myeloma lesions in many bones, but they all ran a quite protracted course quite different from the course pursued by those patients who first have multiple bone lesions and whose disease then progresses rather rapidly to a fatal termination. One of these patients who developed a tumor in the nasopharynx as an apparently primary lesion had an extraordinary course. The lesion reappeared repeatedly following attempts at treatment. The treatment—usually radiotherapy—generally made the lesion go away, but it kept recurring locally. That occurred for about six years; then lesions began to appear in the bones until many bones were involved. In spite of that, the patient was reported to be symptom free ten years after the bone lesions first appeared and sixteen years after the lesion first appeared in the nasopharynx. That seems like an almost incredible case but I can believe it because I personally know another individual who started with a nasopharyngeal plasmocytoma, who developed multiple bone lesions and who still has, by x-rays, great defects in many of his bones, yet he is perfectly well and carrying on an active life without any symptoms at all. So this, then, is certainly a bizarre type of tumor and I simply would not predict what would happen to this patient. He will be most interesting to follow.

DR. HALPERT: Would you give your opinion on plasmocytomas? Are they primary at one site and the other lesions metastatic, or do they occur in many foci at the same time?

DR. STOUT: I think that unquestionably lesions can appear outside of the bone marrow that are neoplastic, which can have involvement of the regional lymph nodes. About one third of the cases investigated had only involvement of the nasopharynx and of the regional lymph nodes in the neck. This would suggest metastasis but, after all, this is a type of tumor that belongs to the lymphatic system or is derived from cells from which the lymphatic and reticulo-endothelial cells are derived, and I do not suppose one could ever prove that such a sequence of events may not be multicentric involvement. I would guess it to be metastasis, but I would not say that I knew it to be, for I know of no way of proving it. From such sequential involvement I would hazard an opinion that it may be metastasis.

DR. TAFT: You mentioned the giant cells which are said to be typical of the plasmocytoma. It seemed to me that most of the giant cells in this specimen were typical multinucleate plasma giant cells.

DR. STOUT: I think some of them were, but some of them were not.

DR. TAFT: I wonder if stilbamidine has been tried in this patient? Does anyone know whether that works in plasmocytomas other than those of bone?

DR. FRERICHS: It has not been tried with this patient.

DR. STOUT: What can you tell us about the results of its use with multiple myeloma, Dr. Taft?

DR. TAFT: I know only what I have read. Snapper and his coworkers in New York say that it is quite a satisfactory drug under certain conditions. He keeps the patients on a low protein diet, watches their calory intake and other variables. They have, he claims, satisfactory results. I know that the results have not been repeated in other hands but, at the time I read about it, they were still enthusiastic.

DR. RABSON: In the last four or five months in an English language journal, the name of which I cannot recall at present, there was a report of six cases of myeloma treated with stilbamidine. The authors did not think their results were any different with the drug than without.

DR. KUZMA: At the Mayo Clinic they have one case treated with P32 who was a moribund case with multiple myeloma two years ago. The patient has been reported as being back at work and in good health now.

DR. STOUT: Radioactive isotopes are fine as palliatives, but I am a pessimist on them as curatives.

#### BIBLIOGRAPHY

- Aragona (quoted by Hellwig). Hellwig, C. A.: Extramedullary Plasma Cell Tumors as Observed in Various Locations. *Arch. Path.* 36:95-111, 1943.  
Esposito, J. J., and Stout, A. P.: Multiple Plasmocytoma of the Jejunum. *Am. J. Roentgenol.* 53:33-39, 1945.  
Maximow, A.: Lymphocytes and Plasma Cells. *Special Cytology*. P. Hoeber, New York 1928, vol. I, p. 321.  
Stout, A. P., and Kenney, F. R.: Primary Plasma Cell Tumors of the Upper Air Passages and Oral Cavity. *Cancer* (in press).  
Snapper, I.: Stilbamidine and Pentamidine in Multiple Myeloma. *J. A. M. A.* 133:157-161, 1947.

#### Lymphosarcoma, Lymphocytic Cell Type, of the Temporal Region

*History* (presented by Lauren V. Ackerman, M.D., St. Louis).—This 45 year old white man gave a history of noticing a lump in the left posterior cervical region which had been growing slowly for four months. Recently, smaller lumps had appeared in the right posterior cervical region and in the left epitrochlear region. About the same time he noticed a sensation of stuffiness in the left ear. Examination revealed a firm, discoid mass in the left posterior cervical region, 7 cm. in diameter. Small palpable nodes were present in both epitrochlear regions, the right axilla and the right anterior cervical chain. The peripheral blood was within normal limits. The sternal marrow was described as showing a slight increase in reticulum cells and primitive cells.

ARTHUR PURDY STOUT, M.D.: *Microscopic Description* (fig. 12).—The subcutaneous tissue and to a less extent the corium is infiltrated by lymphoid tissue which consists largely of masses of lymphocytes and scattered reticulum cells without any evidence of follicle or sinus formation. At its periphery the lymphoid elements infiltrate diffusely without inhibition by fibrous circumscription. All of the cells seem to be differentiated and of an adult form.

*Comment*.—In this case it must be decided

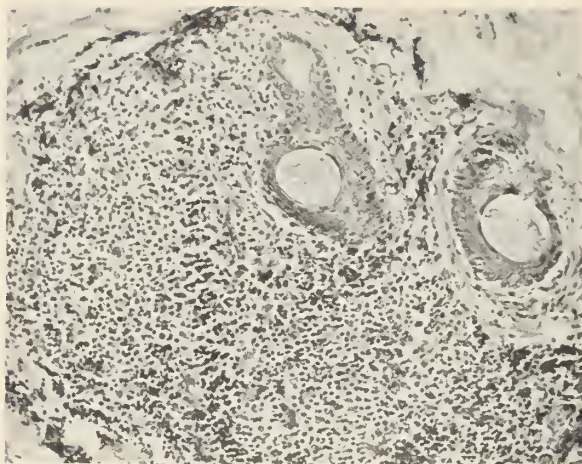


Fig. 12. Infiltration of a mass of lymphocytes around two hair follicles. Magnified 260 times.

whether this is a simple lymphoid infiltration into the skin which is not due to a neoplasm, or whether it is genuinely neoplastic. The good differentiation of the lymphocytes and the intermingling of scattered reticulum cells might make one hesitate to call it malignant. However, it is too large a mass to be simply inflammatory and the evidence of diffuse infiltration at the periphery is significant. One is also aided by the reported enlargement of the cervical lymph nodes. In my opinion this should be classified as a lymphocytic cell lymphosarcoma. The admixture of reticulum cells is an argument against the probability of this being an infiltration due to lymphocytic leukemia. There is nothing to suggest that this is an early solitary lesion of mycosis fungoides, although I suppose that cannot be entirely ruled out. It is difficult to accumulate information about the degree of malignancy of primary lymphosarcomas of the skin. I have to confess that in a recent survey which I made of lymphosarcoma I could not assemble enough cases primary in the skin, subcutaneous tissue and orbit to furnish any accurate information. I have the impression that it is less commonly fatal and that somewhere in the neighborhood of 50 per cent of the treated cases are symptom free after five years while the rest develop evidence of lymphosarcoma elsewhere.

#### DISCUSSION

DR. STOUT: As regards Hodgkin's disease, I could not see any cells that I could recognize as Reed cells.

DR. ACKERMAN: A lymph node showed the same type lymphosarcoma.

DR. REGATO: Dr. Stout, two years ago I took advantage of your Seminar to emphasize our view that lymphosarcoma that is found in lymph nodes should be considered as metastatic. I would like now to suggest that lymphosarcoma that is reported from unusual sites of origin such as the skin should be considered with suspicion.

There was a patient in this hospital who presented what appeared to be a lymphosarcoma of the scalp. On the basis of the slow progress of the disease and the fact that it remained for a long time localized to the head and neck, we questioned, respectfully, the histopathologic diagnosis. The patient died in a state of debility after several years, presenting lymphocytosis in the last stages. The postmortem findings were considered compatible with a chronic lymphogeneous leukemia. I am aware of the fact that the argument could be raised that this was another case of lymphosarcoma that ended in leukemia and that the two diseases are but one. I realize also that in the present state of knowledge such a position is defensible on theoretic grounds, but I think that pathologists should be aware of the fact that the teaching and the application of such a concept leads to nothing but apathy, defeatism and lost opportunity to control many curable lymphosarcomas. It is evident that the morphologic diagnosis of lymphosarcoma is made by exclusion and, dependent upon the pathologist and his experience, he will see a greater or lesser number of other diagnoses to exclude before he reaches the diagnosis of lymphosarcoma. And, where clinical experience and perspicacity are lacking, a morphologic diagnosis of lymphosarcoma goes more often unchallenged, thus contributing further to the confusion of the pathologist.

DR. STOUT: There speaks a true pupil of Coutard. Henri Coutard had a low opinion of pathologic diagnosis! I do not think though that pathologists are quite such ignoramuses as you make them out to be. I think pathologists are aware that there is a definite relationship between most of the lymphoid types of disease and especially between lymphosarcoma and leukemia. All have had occasion to observe cases which we thought were properly called lymphosarcoma on biopsy of lymph node or biopsy of skin, but which later developed definite leukemia and died with the pathologic findings of leukemia. I do not think that necessarily means the original diagnosis was wrong because, in some instances, the two are so closely interallied that one can turn into the other. As I recall the experiments with mouse leukemia and mouse lymphosarcoma that were carried out for quite a number of years by my friend, Maurice Richter, and by the group at Cold Springs Harbor, they not infrequently observed the interrelationship of leukemia and lymphosarcoma. But I would protest against thinking that all of the lesions that are called lymphosarcoma of the skin, say, are necessarily going to develop leukemia toward the ends of their lives. I just do not think that is true. One might say they did not live long enough to get it, and I cannot refute that. Still, in our follow-up, some of them have now lived sixteen or seventeen years without getting it, which is getting on toward the period when it would perhaps be justifiable to say that they are cured.

DR. ACKERMAN: I at times do not agree with Dr.



Regato, although we are still good friends. We have carried on this argument for some time and this will probably seem a little repetitious to some of you, but one of the things that has interested me is the presence of cells in the peripheral blood sometimes appearing in lymphosarcoma. It is known that in children who have a condition called leukosarcoma, when they get masses in the mediastinum it is not too long before cells appear in the peripheral blood, and those patients die rather rapidly. Also in adults, infrequently, cases have been seen in which the bone marrow showed no evidence of invasion but in which the biopsy of various lymph nodes and of the skin showed a picture of lymphosarcoma. In a few instances in these cases there has been invasion of the blood stream by cells which one might designate as lymphocytes or perhaps as lymphosarcoma cells, and in those cases the process seems to go rapidly. In talking with Dr. Reinhard at Washington University, who has seen quite a few cases of lymphosarcoma, he says that in his experience this sequence of events is also rare. It is also true that in a patient with chronic lymphatic leukemia the clinical course is entirely different. Also, the more cases of lymphosarcoma that I see, I would certainly agree with Dr. Regato that looking through the microscope at any particular lymphosarcoma, one cannot tell what is going to happen to it, and that perhaps the site of origin is much more important than the microscopic pattern, particularly in those tumors which arise around the skin and orbit which also (in my experience) have a rather slow course. So I think a great deal more knowledge is needed about these conditions. I would like to ask Dr. Stout and the others here whether or not they have seen many cases of lymphosarcoma in adults which have exhibited terminally a picture compatible with lymphatic leukemia.

DR. STOUT: I agree with what you said about the relationship of lymphosarcoma with leukemia in children, but it can occur also in adults. I believe that of some 300 cases of lymphosarcoma of various parts of the body recorded in our laboratory, six or seven ended up as leukemia. That is not a high percentage.

DR. SEVERANCE: I have seen two cases. In one, the tumor of the stomach had been resected and was diagnosed by me as a lymphosarcoma, and one month following the resection (the blood having been normal as far as I could determine before that time) the blood picture of leukemia began to develop and in another month the patient died of what we said was lymphatic leukemia. I have also seen the reverse—patients diagnosed as lymphatic leukemia who later developed tumor nodules resembling lymphosarcoma. I have seen several of those.

DR. REGATO: May I say that cases starting with a clinical picture of lymphosarcoma and later on becoming clear cases of leukemia were described by Cohnheim as pseudoleukemia. One could take

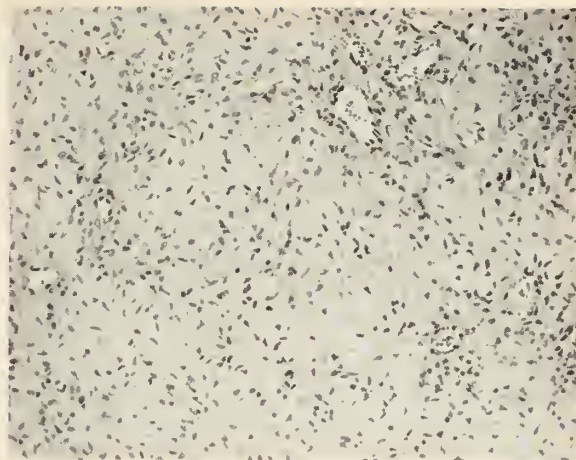


Fig. 13. A proliferation of stellate cells in a myxoid stroma without any lipoblasts: the characteristic appearance of the myxoma. Magnified 260 times.

the position that all such cases were leukemias in the first place and were misdiagnosed as lymphosarcomas. In children, the lymphosarcomas that apparently turn into leukemia never give a high leukocytosis and, in addition, supravital staining may identify the cells in the blood as lymphosarcomatous cells in circulation, not true leukemic cells.

#### BIBLIOGRAPHY

- Richter, M. N.: Leucemia, in *Handbuch of Hematology*, Sec. 42, pp. 2992-2997, 1938.  
Stout, A. P.: The Results of Treatment of Lymphosarcoma, *N. Y. State J. Med.* 47:158-161, 1947.

### Myxoma of Zygomatic Bone

*History* (presented by Lauren V. Ackerman, M.D., St. Louis).—This 52 year old white woman complained of a slowly growing mass in the region of the left zygoma, of several months' duration. There had been no nasal discharge or epistaxis except following a "cauterization" of the nose, which might suggest nasal polyps. There had been rather severe pain directly over the lesion. Examination revealed an indurated, fixed, but not bony hard, mass in the region of the superior lateral wall of the left maxillary sinus. This was excised locally. The parotid gland on the same side was normal and the inner surface of the antrum was free from tumor. The gingivobuccal gutter on the left was also negative. X-rays showed bony destruction of the zygoma.

ARTHUR PURDY STOUT, M.D.: *Microscopic Description* (fig. 13).—The section shows a tumor which is made up altogether of stellate cells set in a myxoid stroma. The density of the stroma varies somewhat and there are more connective tissue fibers in some areas than in others. There are also those masses of calcium-containing material which may be degenerative parts of the bone in which the tumor has grown, or they possibly may belong to the tumor itself. I thought they probably did not belong to this tumor.

*Comment.*—This appears to me to be a pure myxoma. The only reservations necessary are to be sure first that one is not dealing with the stroma

of an adamantinoma which can appear myxoid in young children; this can be excluded here because of the location of the tumor. Second, that the tumor is not a chondrosarcoma which can also have myxoid areas in it; I can see no evidence of this in the section. Most of the myxomas of bone which I have studied have been in either the mandible or maxilla. I have seen five in the mandible, three in the maxilla, one in the clavicle and one in the metatarsal bone. But Jaffe has shown me a good many others in the various bones of the body; he sees a great many more of these bone tumors than I. They tend to expand the bone with destruction and when the periosteum is reached it is forced outward for varying distances. In the literature there are records of a few myxomas in long bones but this is apparently rare. An important thing to remember about the myxoma is that it does not metastasize. It can infiltrate extensively and when it arises in the genito-urinary organs, especially those of infants, it usually causes death because of ineradicable invasive growth but, if it is possible to remove the entire tumor, it can be cured. It is probable that the sticky material in myxomas is hyaluronic acid since it can be fluidified by hyaluronidase.

Since a number of different tumor varieties may have myxoid areas in them, it is important to be sure that there are no lipoblasts, rhabdomyoblasts, chondroblasts or any other differentiated tissue forms in the tumor, and that it is not a fibrosarcoma with areas of myxoid degeneration. If this is done it will never be necessary to use the term myxosarcoma which I deplore because it leads to so many errors. If the criteria for judging a myxoma are rightly adhered to, one can state positively the expected course following treatment but, if the term myxosarcoma is used, it leaves one in doubt as to what is the true nature of the tumor and how malignant it will prove to be.

#### DISCUSSION

DR. STOUT: Before we begin this discussion, let me make some comments about the various diagnoses you have made on this case. Liposarcoma was suggested. The question of whether or not liposarcomas can develop in bone marrow is still open to debate. You may recall that some years ago Fred Stewart reported several cases of what he called liposarcoma of bone, and following that report there were some more from various people. I took occasion to find out that in each one of those reports the diagnosis of liposarcoma was confirmed by Dr. Stewart at the Memorial Hospital, so really he is the protagonist of that diagnosis. Now he has decided, he tells me, that he was probably wrong in calling those tumors liposarcomas; he no longer believes they are liposarcomas, and he does not know what they are. I do not think this tumor now under discussion is a liposarcoma because it apparently has only these stellate and spindle-shaped cells. I do not like to use the term myxochondroma;

I would much prefer the name chondroma of embryonal type because that would indicate the idea that it was simply a variant of the chondroma. I could not see anything which looked like a differentiation into cartilage cells, so I do not think that is the correct diagnosis. We might entertain the diagnosis of fibrous dysplasia because if those peculiar calcified bodies that are found in clusters in this tumor are part of the neoplasm, it is quite possible that it is a fibrous dysplasia with myxoid stroma, but I could not bring myself to be sure that they were; I thought they could be explained as remnants of the bone which had been invaded by the tumor growth. Again, I did not see any physaliferous cells, so I did not believe it was a chordoma. The term "endothelioma" goes back to Dr. Ewing's use of it, I suppose. I would assume that an endothelioma of bone would mean a Ewing's tumor, but I cannot believe that anybody would consider this a Ewing's tumor, so I am uncertain what that term means in connection with this tumor. Does it mean a giant cell tumor of bone? I did not see any giant cells. I think that the term fibroma ought to be applied to differentiated fibrous tissue. I have never had occasion to see a central fibroma of bone. For some of the fibrous growths attached to the periosteum one might possibly use the term fibroma but, again, I would prefer to use the term differentiated fibrosarcoma because those tumors, while many of them do not metastasize, do show infiltrative progressive growth which removes them from the group of true fibromas that do not show progressive infiltrative growth but only limited growth to a small or relatively small size. I agree, therefore, with the diagnosis of myxoma. I have already stated in my discussion why I would not use the term myxosarcoma; to me this term means either myxoma, or some other kind of sarcoma. I do not think that this is a sarcoma.

DR. TAFT: Was a fat stain done on this tumor?

DR. ACKERMAN: Yes, but it was negative.

DR. TAFT: It is my impression that this tumor might be termed malignant in the same sense as the fibroma from the shoulder that we saw earlier. Applying your criteria of local recurrences eventually causing the death of the individual, I fail to see that this tumor could not be called malignant.

DR. STOUT: Two years ago when I reviewed the sarcomas of the soft parts, I included myxomas with the sarcomas for the same reason that I included differentiated fibrosarcomas. I did not call it sarcoma because the name myxoma has been so widely used that it seemed unwise to try to use some other name. But I did not want to use the term myxosarcoma, for I have seen that term applied in many reports to malignant metastasizing tumors and, so far as my experience goes, this kind of tumor does not metastasize. For that reason I did not want to use the term myxosarcoma which has been so loosely used by other people for various kinds of growths. I agree completely that this



is quite comparable to the differentiated fibrosarcoma; it displays the same kind of infiltrative growth and it can kill, especially in the tumors of infants in the generative organs of the pelvis. It does not often kill in adults, and these tumors, by the way, seldom invade outside bone; they continue to expand the bone but they do not seem to penetrate through the periosteum. If one resects the bone with the periosteum in the affected area, one cures these people; one does not have to remove a lot of tissue outside of the bone. When, however, the myxoma grows in the soft parts, it can grow out to considerable distances beyond where one can palpate its presence. Dr. Regato, have you had any experience in radiotherapy of myxomas?

DR. REGATO: No, sir.

DR. SEVERANCE: Does Cushman Haagensen still feel that myxomas are a form of liposarcoma, as he said at one time in New York?

DR. STOUT: I do not think so. He now believes a liposarcoma is a liposarcoma, and a myxoma, a myxoma.

DR. HALL: I would like to know your attitude toward a reticulum stain in the identification of tissues such as this, and also as to their indication of greater malignancy.

DR. STOUT: When you say "reticulum," I assume you mean the fibers which are blackened when a connective tissue silver stain is used. I am a follower of Nageotte in using the term "reticulin," because then one does not get mixed up with all the other kinds of reticulums: the sinusoidal cytoplasmic reticulum that one gets, for instance, in the sinuses of a lymph node, is different from the reticulin of connective tissue fibers which are extracellular entirely. In diagnosing a tumor such as this, I think a reticulin stain is little help, indeed. If one stains this tumor with silver, one will see delicate fibers and sometimes coarser ones of collagen density, but always with spaces in between these fibers containing, I believe, hyaluronic acid. I do not think that a great deal of aid in differentiating such a tumor as this from others can be gained by using a silver stain. You probably want me to say how useful it is in recognizing reticulum cell sarcoma, because it is often said to be an important differential method aiding one in its recognition. If there are delicate blackened fibers among the cells, I am assured by those who use that method of differentiation that this fact makes it almost certainly a reticulum cell sarcoma; if they are absent, it is some less differentiated form that has not succeeded in forming fibers. The catch there is that these fine, delicate, silver-blackened fibers can be found sometimes, for instance, among the cells of an infiltrating carcinoma, so it does not help me much in differentiating between a completely undifferentiated carcinoma and a reticulum cell sarcoma. I generally avoid using the silver stain under those circumstances because I do not want to be confused, and I am afraid I would be confused if I did it and tried to place a great deal of reliance

upon it. I think it probable that these reticulum cells are capable of manufacturing fine connective tissue fibers, but I do not think they always do it in tumors so I do not think it is always a reliable criterion. I go by much less delicate and much less scientific methods, since I feel that I do not know anything about these cells and am not erudite enough to recognize their minute variations. I use the extremely unscientific method of judging them by the size of the cells; if the cell is less than twice the diameter of a small lymphocyte, I arbitrarily call it a lymphocytic cell lymphosarcoma and, if it is twice or more than twice the size of a small lymphocyte, I arbitrarily call it a reticulum cell sarcoma. This is an inaccurate method, but it provides a rule of thumb which gives some criteria that can be employed easily. If one reads some of the complex names that are used for some of these tumors of the lymphatic system, one simply gets lost. Moreover, which of the authorities will you choose to follow? Let me recall that some years ago when Fred Stewart reported with Craver cases of sarcoma of lymph nodes from the Memorial Hospital, he said they had something like 94 per cent reticulum cell sarcomas, and when Shields Warren some years ago reported his differentiation of the different kinds of subdivisions of lymphosarcomas, he had 3.6 per cent cases of reticulum cell lymphosarcoma. Obviously their criteria for judging these reticulum cell lymphosarcomas are vastly different and until the real authorities and experts can reach a method of classification which I can understand, I am going to continue to be unscientific and use my old method.

DR. TRIBBY: I would like to introduce the question as to whether it is worthwhile to classify lymphoid tumors into numerous groups, because it seems that their response to treatment by x-ray varies so little. Why not settle on just one term, lymphosarcoma, and let it go at that?

DR. STOUT: I think your point is well taken, because when I attempted to try to determine results of treatment of reticulum cell sarcoma and lymphocytic cell sarcoma, it came out the same at ten years. When I formerly tried it out for five years, the reticulum cell sarcomas seemed to be a little worse, but when I got the longer follow-up figures, they all came out the same in the end. However, there is some value in trying to separate the giant follicle lymphosarcomas, that is, the differentiated ones, because they definitely have a better prognosis. Do you agree, Dr. Regato?

DR. REGATO: Entirely.

#### BIBLIOGRAPHY

- Stout, A. P.: Myxoma, the Tumor of Primitive Mesenchyme, *Ann. Surg.* **127**:706-719, 1948.  
Stout, A. P.: The Results of Treatment of Lymphosarcoma, *N. Y. State J. Med.* **47**:158-164, 1947.  
Nageotte, J., and Guyon, L.: Reticulin, *Am. J. Path.* **6**:631-654, 1930.  
Sugarbaker, E. D., and Craver, L. F.: Lymphosarcoma: A Study of 196 Cases with Biopsy, *J. A. M. A.* **115**:17-23, and 112-117, 1940.  
Warren, S., and Picena, J. P.: Reticulum Cell Sarcoma of Lymph Nodes, *Am. J. Path.* **17**:385, 1941.

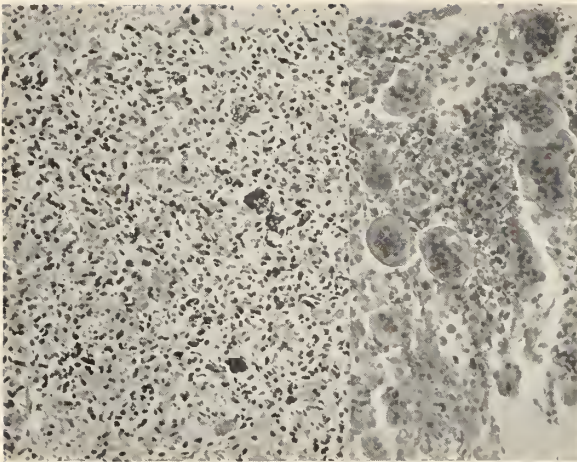


Fig. 14. At the right is shown part of the lesion in the lung. The small area of ossification is not shown. Magnified 260 times. At the left is a small portion of the sacral lesion which is strongly suggestive of a giant cell tumor. Magnified 1240 times.

### Undiagnosed Condition of Lung and Sacrum (Osteogenic Sarcoma ?, or Metastasizing Giant Cell Tumor ?)

*History* (presented by J. Owen Blache, M.D., St. Louis).—This 19 year old Negro woman entered the hospital on May 28, 1947, with a history of increasing pain in the lower extremities. Two years previously, following a fall from a street car, she developed a swelling in the "back" in the region of the sacrum. She received x-ray therapy during 1945 and 1946, but the tumor had slowly increased in size. X-rays revealed destruction of the sacrum and the lower lumbar vertebrae, with formation of a large cyst involving the sacrum and extending across the left sacroiliac joint into the ilium. An x-ray of the chest revealed unusual enlargement of the hilus, especially on the left, which was interpreted as metastatic tumor. The patient expired three months later.

ARTHUR PURDY STOUT, M.D.: *Microscopic Description* (fig. 14): I do not know whether all discovered in your sections the fact that in this metastasis in the lung there is a small spicule of bone at the margin of the growth. When I wrote my description of this, I had failed to discover that, but I will refer to it later. You will recall that in part of this tumor there is pronounced formation of giant cells and there are also many vessels, most of them thrombosed.

The section from the lung shows a portion of a sharply circumscribed, rounded nodule in the lung. It is apparently vascular and its exact make-up is difficult to evaluate in the hematoxylin and eosin section. Apparently there has been a tremendous proliferation of exceedingly delicate, thin-walled capillaries lined by normal appearing endothelial cells. In many places small thrombi are present. Outside the capillaries and filling the spaces between them are cells of extremely vague outlines due apparently to much cytoplasmic vacuolization. Some of these cells are phagocytes with either blood pigment or lipid. Their nuclei are not hyper-

chromatic, they do not have large nucleoli, mitoses are uncommon and they do not strongly suggest malignancy. Mixed with these are a number of multinucleated giant cells of an appearance suggesting the foreign body or osteoclastic type which appear, some of them, to have phagocytosed both lipid and blood pigment. And then there is that little spicule of bone present at the margin of this tumor. I have also had the privilege of examining a section from the lesion in the sacrum and ilium which showed a lesion much more like an ordinary giant cell tumor. One can see in this lung metastasis some appearances suggestive of giant cell tumor, but in the section from the sacrum the appearance is even more striking.

One must try, then, to determine the nature of a process which looks a good deal like a benign giant cell tumor of bone in its primary site and in its metastasis still retains some of those differentiated features, although it is a good deal more vascular, and in which a small spicule of bone has formed in its periphery. Now, assuming the lesion in the sacrum is the primary lesion in this case and that the lesion in the lung is a metastasis, one might think of liposarcoma, supposing that the cells in the lesion are lipoblasts. Although several cases of liposarcoma of bone have been reported (as have already been discussed) it is doubtful whether any true case has ever been described. So I think it is not a liposarcoma. One must also speculate as to whether or not this is primarily a vascular tumor. I reject this also because the vessels seem to me not to be an integral part of the lesion. However, I do not think it can be ruled out entirely from the appearance of this metastasis alone. Turning to a consideration of the bone and lung lesions as both secondary from some other primary source, one might consider the possibility of metastasis from a malignant paraganglioma because of the pattern of the growth. (That is true especially in the lung lesion). The presence of so much vacuolization of the cells and the foreign body type of the giant cells makes this diagnosis dubious but, on the section of the lung alone, I do not feel that I could exclude it completely. Nor could I wholly exclude some form of reticulo-endotheliosis although, if it is one, I cannot give it a name. On clinical and x-ray grounds especially, one must give serious consideration to the osteolytic form of osteogenic sarcoma which can produce microscopically an imitation of a giant cell tumor. The examination of this slide alone must leave that diagnosis also a speculation, so far as I am concerned, for there is no evidence of real differentiation.

I saw the biopsy of the sacral region and, as I told you, that shows a lesion which looks like a benign giant cell tumor. Therefore, the question comes up as to whether it is proper to call this an osteolytic form of osteogenic sarcoma or whether there is such a lesion as a benign metastasizing giant cell tumor. This comes as close to being an example of



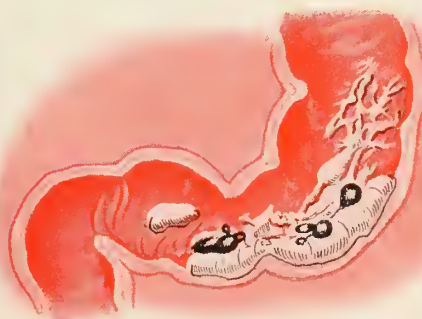
TREATMENT  
OF CONSTIPATION  
IN  
**mucous  
colitis**

*"The treatment of the constipation in mucous colic does not differ from the treatment of uncomplicated constipation. It is, as always, of great importance to avoid irritating aperients, . . . The stools should be rendered soft and more bulky and therefore more easy to expel with . . . and unirritating vegetable mucilages."*

—Hurst, A., in Portis, S. A.: Diseases of the Digestive System, ed. 2, Philadelphia, Lea & Febiger, 1944, p. 692.



**MUCOUS COLITIS.** In this x-ray is shown the distinctive string-like appearance of the descending portion of the lower bowel in mucous colitis, a condition frequently accompanying severe degrees of spastic or tonic colon. In the sagittal section is shown the over-secretion of mucus adhering to the bowel wall.



By providing soft, demulcent, water-retaining, mucilloid bulk, Metamucil—the "smoothage" treatment of constipation—promotes a return to normal elimination.



**METAMUCIL®** is the highly refined mucilloid of *Plantago ovata* (50%), a seed of the psyllium group, combined with dextrose (50%), as a dispersing agent.

**SEARLE** *Research in the Service of Medicine*

G. D. SEARLE & CO., CHICAGO 80, ILLINOIS

a benign giant cell tumor metastasizing to the lung as I have ever seen, but it is impossible for me to believe in its existence. To me the so-called giant cell tumor is not a tumor at all; it is a granulomatous lesion, not neoplastic. So I would be inclined to believe that this is more probably a form of osteogenic sarcoma that has retained its imitation of the giant cell tumor. The fact that it formed a little spicule of bone in the periphery of the metastasis makes me somewhat more favorable to that interpretation.

DR. ACKERMAN: I venture my opinion reluctantly for it means that I disagree with Dr. Stout. I feel that the giant cell tumor is a neoplasm. I deliberately persuaded Dr. Blache to include this case in order to start this argument, because I was sure it would come up! I had looked at this tumor myself and I said, "If this is not a giant cell tumor, then how can I call it an osteogenic sarcoma when I cannot see any differentiating points? If this is to be called an osteogenic sarcoma, what am I going to say about the other giant cell tumors that I see?" I think Jaffe, Hatcher and Stewart believe that there is such a thing as a giant cell tumor and that it is a neoplasm which can rarely metastasize. I agree with them and I personally have seen two other cases which to me were certainly suggestive. I would have had a lot of difficulty in calling them osteolytic-osteogenic sarcomas. Also, I think that if one of these tumors metastasized, probably it should not be designated as benign metastasizing because that is something like the thyroid problem; I think it should then be designated as a malignant sarcoma. Now, if Dr. Stout were to ask me the histogenesis of the giant cell tumors, I would have to say that I am not certain. Giant cell tumors rarely become malignant, or infrequently are malignant from the start. Such malignant variants usually arise in the characteristic location of a giant cell tumor (epiphyseal area of long bones). Often they have been inadequately treated, and at times they are associated with trauma. Local recurrence, failure to heal and distant metastases may indicate malignant change. When the primary tumor and the metastases are typical microscopically of giant cell tumor (as in this case), I cannot avoid making a diagnosis of malignant giant cell tumor. I would certainly agree that at times, because of incorrect interpretation, an osteolytic sarcoma has erroneously been designated as a malignant giant cell tumor. In addition, other lesions are called giant cell tumors which are not (Jaffe). I think this case is interesting in that there was a history of trauma and whether or not that had anything to do with blood stream metastasis, I do not know. There is not much tumor in this case; there is no tumor in any other area, and I think that is an interesting point, too. There was another case in Milwaukee which had a history of trauma with metastasis. That is not the usual way for an osteogenic sarcoma to behave; as a general rule, when it gets to the lung it is not just one lesion.

DR. RABSON: I would like to ask Dr. Ackerman whether in these cases of so-called metastasizing giant cell tumors metastasis was single or multiple.

DR. ACKERMAN: There were other cases with multiple metastases.

DR. RABSON: The reason for the question is my recollection that several years ago we had a man of about 40 years of age with a tumor of the upper part of the humerus. It was resected and my diagnosis was telangiectatic osteogenic sarcoma, not giant cell tumor. There was but a solitary metastasis to the left adrenal at necropsy three and one-half years later. The pathologist who succeeded me reported that there was no formation of bone in that metastasis. The formation of bone, however, is the main point in this case against the giant cell tumor and in favor of osteogenic sarcoma, because one of the criteria of osteogenic sarcoma is its ability to create bone. It may not always form bone but when it does it makes ruling out the diagnosis of osteogenic sarcoma difficult.

DR. STOUT: I would like to ask Dr. Ackerman this: you say you do not see any reason why they should be called an osteogenic sarcoma on histologic grounds. How can you tell the benign giant cell tumor which will metastasize from the benign giant cell tumor which will not?

DR. ACKERMAN: I do not have the answer to that, yet! I know that Jaffe has put forth a series of criteria on which he purports to grade these tumors on the basis of changes in the stroma, but I do not know how reliable it is. I have heard other people express skepticism about the value of that grading.

DR. NEAL: Martland and his group years ago recorded a case of so-called benign metastasizing giant cell tumor of the head of the tibia. We had one under observation at the University of Missouri Hospital in Columbia at the same time and it took a parallel course. The sections were seen by men at Johns Hopkins, at St. Louis, and at the Mayo Clinic, and they all agreed in the diagnosis of benign giant cell tumor. The patient fell and, shortly after the fall which resulted in fracture, developed lesions in the femur. There was eventually amputation at the hip joint. Before the patient died approximately eighteen months later, there were metastases through practically her entire body, involving the osseous system and internal organs. I would like to ask Dr. Stout if in his experience he has encountered a benign giant cell tumor that jumps from one bone to another bone as here, and from these two bones to give generalized metastases? Ordinarily it is interpreted that benign giant cell tumor respects cartilage and does not involve articular surfaces.

DR. STOUT: I have seen tumors that look histologically like benign giant cell tumors grow from bone into the capsule of the knee joint, for instance, but I cannot recall ever seeing one go further, around into the tibia from the femur, for instance. I know of malignant tumors that did that, but not



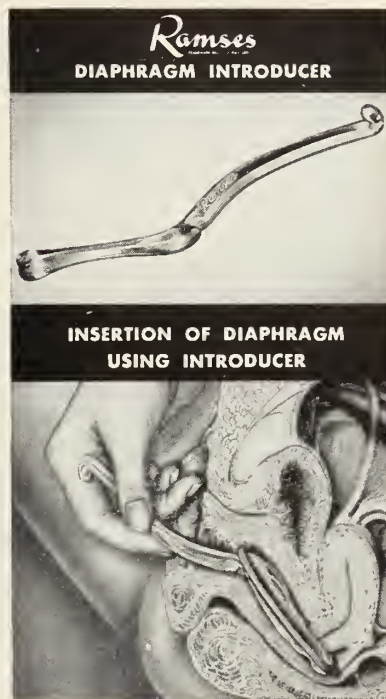
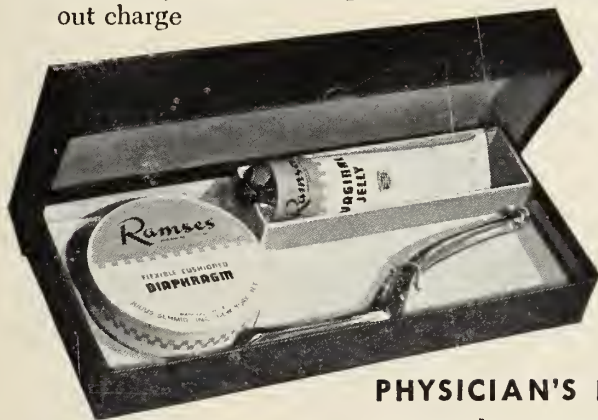
# *Facts About Conception Control*

## **THE USE OF THE DIAPHRAGM INTRODUCER**

Use of a diaphragm introducer is favored by many patients who find manual manipulation objectionable or difficult. It facilitates the insertion and correct placement of the diaphragm, as well as its removal. The "RAMSES"\* Diaphragm Introducer provides the following features:

- Simplicity and convenience in use
- Safety — design minimizes possibility of injury to the cervix or accidental insertion into the urethra
- Smooth surface lessens bacterial proliferation — makes for easy cleaning
- Ease of removal assured by bluntly hooked end

The "RAMSES" Diaphragm Introducer is supplied in the Physician's Prescription Packet No. 501, without charge



**Ramses**  
TRADEMARK REG. U.S. PAT. OFF.

### **PHYSICIAN'S PRESCRIPTION PACKET NO. 501**

A complete unit for conception control. Contains (1) a "RAMSES" Flexible Cushioned Diaphragm of the prescribed size, (2) a "RAMSES" Diaphragm Introducer of corresponding size, and (3) a tube of "RAMSES" Vaginal Jelly† (regular size).

\* The word "RAMSES" is a registered trademark of Julius Schmid, Inc.

† Active Ingredients: Dodecaethyleneglycol Monolaurate 5%; Boric Acid 1%; Alcohol 5%.



***gynecological division***

*Julius Schmid, Inc.*

**423 West 55th Street, New York 19, N. Y.**

**quality first since 1883**

"RAMSES" Vaginal Jelly is accepted by the Council on Pharmacy and Chemistry of the American Medical Association. The "RAMSES" Diaphragm and Diaphragm Introducer are accepted by the Council on Physical Medicine of the American Medical Association.

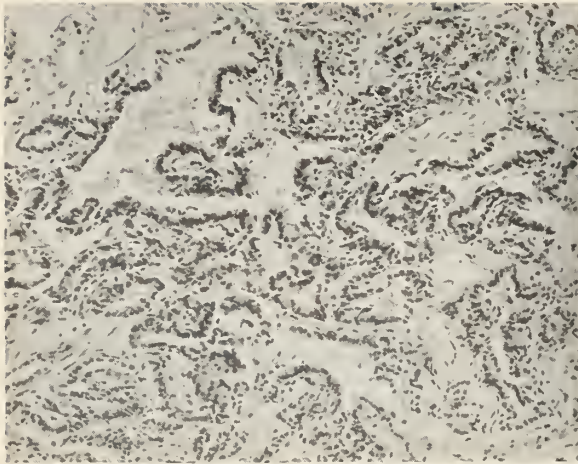


Fig. 15. A papillary glandular carcinoma of the thyroid. Magnified 260 times.

ordinary giant cell tumors. Do you recall what the metastases looked like in the case you just mentioned?

DR. NEAL: They were identical with the primary lesion.

DR. STOUT: They all looked like a benign giant cell tumor?

DR. NEAL: Yes, sir, they did.

DR. STOUT: That would be a case in some respects comparable to this. I would think.

DR. TRIBBY: There is one other case that I have seen which is almost a duplicate of this one. The tumor occurred in the ilium, was large, and the biopsy showed what we thought was a benign giant cell tumor. An attempt was made to excise the tumor from the ilium. The patient died about three weeks later. At autopsy there were multiple tumors in the lungs, liver and I believe the bones were extensively involved, also. The metastases—or at least what was thought were metastases—looked exactly like the original tumor, but there were many more of them than in the present case.

DR. STOUT: Whatever one chooses to call this lesion, I judge from this present case, the others which are mentioned like it, and from Jaffe's cases which I have not seen but which I have heard him talk about, that this seems to be a definite entity. I still do not understand its nature, and the cases which I have seen that imitate benign giant cell tumor but which are really osteolytic forms of osteogenic sarcoma do not look histologically altogether like benign giant cell tumors. I will have to admit that your arguments in favor of this as a special entity are better than my arguments in favor of its being a metastasizing osteolytic osteogenic sarcoma. I still would like more light on the subject, however, because it is a bizarre lesion, indeed.

UNIDENTIFIED SPEAKER: Dr. Geschickter states that he has several cases similar to this and he relates them to having had numerous curettements of the lesion.

DR. STOUT: That must be a rare event because enormous numbers of giant cell tumors have been curetted and one does not anticipate that metastasis will occur. This has been an instructive case. I am happy to have seen it.

#### BIBLIOGRAPHY

Jaffe, H. L.; Lichtenstein, L., and Portis, R. B.: Giant Cell Tumor of Bone, *Arch. Path.* 30:993-1031, 1940.

#### Papillary Carcinoma of the Thyroid

*History* (presented by Richard E. Johnson, M.D., Columbia).—This 74 year old white man complained of a mass in the left side of the neck, present for nine years and gradually increasing in size. Examination revealed a lobulated, cystic mass measuring 12 by 4 by 4 cm., lying behind the anterior border of the sternomastoid muscle. By aspiration biopsy, a small amount of clear yellow fluid was obtained; no cells were present. An electrocardiogram was interpreted as showing an old coronary infarct, myocardial damage and left bundle branch block. The clinical impression was branchial cleft cyst and surgical abstention was advised. The patient was readmitted eight months later because of difficulty in swallowing. The mass then measured 14 by 5 by 4 cm. Under local anesthesia the cystic mass, together with the left lobe of the thyroid gland and a segment of the internal jugular vein, was removed. The inferior pole of the cyst was continuous with the capsule of the thyroid. In this region a small mass of soft, reddish tissue projected into the lumen of the cyst. Elsewhere, the wall appeared to be entirely fibrous in character. The superior thyroid vein was incorporated in the base of the cyst. The internal jugular vein was not involved. The section is from the junction of the cyst and thyroid gland.

DR. STOUT: Is there additional information pertinent to this case?

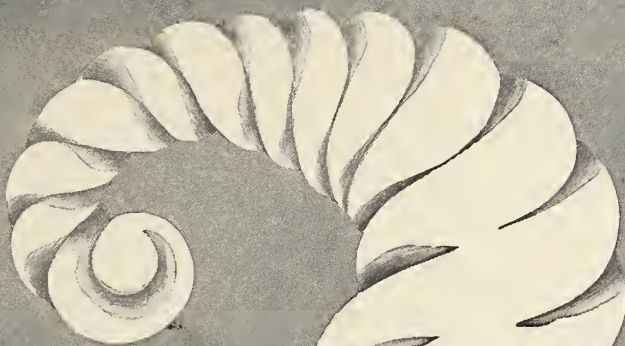
DR. JOHNSON: In the specimen removed, there were a total of eleven lymph nodes from the anterior cervical chain, and one of these showed a small area of tumor in the capsule.

DR. STOUT: Whatever one believes about that, there are some thyroid follicles in the margin of the lymph node and it looks as if there were some of them possibly in the afferent lymphatics entering the marginal sinus. It is a small area of involvement.

ARTHUR PURDY STOUT, M.D.: *Microscopic Description* (fig. 15).—The section which was sent around was made from the wall of the large cyst and shows a proliferation of relatively well differentiated thyroid tissue set in a fibrous framework which is sometimes dense and scarred. The thyroid tissue at times shows ordinary apparently nonneoplastic follicles but, more often, twisted tubes are formed which are either empty or contain a little blood or colloid. The cells are short cylinders and papillary infoldings of both cells and fibrous tissue are observed in some areas but are not striking or universal. If mitoses are present, I have not detected them. Only one psammoma body has been identified in this section. A few epithelial cells have been discovered within the lumens of two veins.

*Comment.*—This is apparently a true neoplasm belonging to the least malignant group of carci-





Prophetic —  
even far bountiful America.

That is why vitamin  
supplementation, in conjunction  
with a balanced diet, is now  
recognized as the best assurance  
of adequate vitamin intake.

There is no lack of farms and  
of dosages through which the  
abundance of vitamin adequacy  
can be assured both  
for prophylaxis  
and for therapy.

*"In all  
abundance  
there  
is lack"*

HIPPOCRATES, Precepts

Upjohn prescription vitamins  
are available in a full range of  
potencies and formulas  
to meet all the requirements of  
modern practice.

## UPJOHN VITAMINS

**Upjohn**

KALAMAZOO 99, MICHIGAN

*Fine  
pharmaceuticals  
since 1886*

neomas of the thyroid in which are found the so-called adenoma malignum, the papillary carcinoma and the Hürthle or Askanazy cell carcinoma. Usually these tumors are pure types but in this case the growth appears to be an admixture of papillary and simple glandular forms. This is not unknown and generally we have classified such tumors as papillary growths because they behave like them by metastasizing, if at all, to the cervical lymph nodes rather than to the bones as is the case with adenoma malignum. And this tumor apparently has behaved in the way expected by metastasizing to a lymph node in the neck. Since this tumor was attached to a lobe, I suppose it must be classified as a primary thyroid carcinoma. I do not recall that any of our cases formed a huge cystic neoplasm in the side of the neck extending down as far as the clavicle, as has occurred in this patient. The age of the patient is somewhat unusual for a papillary thyroid tumor; in our files the mean age of patients with papillary tumors has been 42.8 years, with the extremes from 7 to 82 years. We have observed only one patient in the eighth and ninth decades with papillary thyroid carcinoma. Incidentally, it is interesting to call attention to the fact that although one expects to find the spindle and giant cell carcinomas of the thyroid in old people especially, it is apparently possible for them to appear in youth. I have had an opportunity to study a section of the case of thyroid tumor reported by the late Dr. Louise Meeker as fibroblastic sarcoma of the thyroid in the *Proceedings of the New York Pathological Society* in 1922. In my opinion this is certainly a spindle cell carcinoma. It appeared first at the age of 14, grew rapidly, and two attempts were made to excise it eighteen and twenty-five months after onset. It was vascular, infiltrated the tissues of the neck, and the second attempt was followed by death after ten hours. This present case of a papillary carcinoma at the age of 74 and the spindle cell carcinoma at the age of 14 warn not to be surprised at the unexpected.

These papillary tumors are not usually very malignant. In Crile's recent report of twenty-one papillary tumors operated upon and followed from five to twenty-one years or until their death, only three died from cancer; one with local recurrence and two with distant metastases. They lived respectively nine, fifteen and nineteen years after the original thyroidectomy. He quotes another untreated patient alive and well twenty-seven years after the appearance of proved papillary thyroid tumor in the lateral neck. This is a somewhat better record than that of Horn and his associates and of ourselves with approximately one in every three cases resulting fatally, but the difference is unimportant. The striking features of papillary carcinoma are its long duration and the relatively high incidence of lateral neck involvement without a correspondingly high fatal termination by further spread. I am not one who subscribes to the sweeping statements that these lateral papillary thyroid tumors are in-

variably metastases from an obvious or occult tumor in the thyroid, which have become popular since the papers of King and Pemberton, and Clay and Blackman. But if they are correct, it is still astonishing that metastases can take place so readily from thyroid to many nodes on one or both sides of the neck with such an infrequent spread to the mediastinal nodes and elsewhere.

I am in complete agreement with the treatment used in this case. There is probably nothing to be gained by further lymph node dissection at this time in such an elderly patient. Now, I would like to show some charts which I have, modified from a paper which will be published by Frantz, Quimby and Evans, showing something about the incidence and types of carcinoma. I will first show the chart indicating the incidence of thyroid carcinoma in nontoxic goiter and adenomas. Here, among 4,707 cases of thyroidectomy or partial thyroidectomy, there were 1,678 toxic diffuse goiters and 753 toxic nodular goiters and adenomas, and 2,125 cases of nontoxic nodular goiter and adenoma. During the same period (1924 through 1947) there were a total of 151 cancers of the thyroid; 118 of them primary in the thyroid itself and 33 primary in the lateral neck. That gives an incidence of carcinoma in nontoxic cases of operated thyroids of 6.6 per cent. That is higher than the reports from the Lahey Clinic and the Mayo Clinic where the incidence is more in the neighborhood of 2 per cent. I think the reason for this higher incidence has been the rather unusual number of thyroid carcinomas especially referred in recent years to our hospital for treatment with radioactive iodine. The next chart shows the names of the different kinds of carcinoma which we use. We recognize them in three groups based upon the histologic type. The first group consists of the papillary tumors, the adenoma malignum type, and the Hürthle cell type which Dr. Quimby has shown with I-131 tracer doses is a hormonally inactive type; it does not take up the I-131. They form three fourths of all the malignant thyroid tumors. Then there is the middle class which is a kind of scrapbasket for the cases which we are unable to place in either the first or third groups. They are less well differentiated than the first group, but better differentiated than the extremely malignant last group which includes the giant and spindle cell carcinomas. Those two groups together form the other 25 per cent. The last chart shows the percentage of bad results from the different kinds of thyroid carcinomas and the reason for attempting to make the differentiation into these classes. It shows that the least malignant form having poor results represented by death or persistence of disease is found in the papillary group and is 34.5 per cent. We are not so sanguine as Crile about the harmlessness of these papillary tumors. It is certainly true that some patients live an inordinately long time, but the tumor can metastasize to a distance as well as to the lateral neck region. The adenoma malignum is more malignant;



it has a higher poor result figure. But the second and third groups are malignant, indeed. Of the giant and spindle cell carcinomas we have no good results at all, and only two of thirteen cases in this middle group survived for a long time following treatment.

At this time I would like to make some comments about the relationship of the lateral papillary tumors to the ones which manifest themselves first in the thyroid gland itself. If one takes the lateral group alone—that is, the group that manifests itself clinically in the lateral neck first—the poor results at five years are only 12 per cent. It seems exceedingly incongruous that a tumor which appears first in a metastatic form should have a better result than the same histologic type of tumor when it appears first in the supposed primary site in the thyroid. So, I am unwilling to believe that all of these lateral thyroid growths are necessarily metastases. I would rather think of them as multicentric lesions with the primary lesions both in the lateral neck and in the thyroid itself. However one regards it, one still cannot get over the fact that the lateral neck tumors when they appear first have a better prognosis in our experience than when the same papillary tumor appears first in the thyroid.

#### DISCUSSION

DR. MODLIN: I would like to inquire two things: first, have you ever seen or heard of a case such as this in which the presenting symptom was a cystic enlargement? The correct diagnosis in this particular case was first suspected at operation; the patient was then under local anesthesia so that the operation necessarily was limited somewhat in scope. Secondly, I would like to inquire if you feel that a radical neck dissection including removal of the homolateral lobe of the thyroid should be done, even though the aberrant tumor presents itself first? In other words, if an aberrant tumor is removed, should the patient then be subjected to a neck dissection?

DR. STOUT: The ideas about treatment of papillary tumors of the thyroid and of the lateral neck have changed enormously at our Clinic, and I think in all clinics, as time has gone by. There are various ways in which one can treat them. No matter whether the tumor appears first in one lobe without any evidence of lateral neck disease, or whether it appears in the lateral neck, or whether it appears in both places or in both sides of the neck (because all combinations are possible and seen) one can say one will make sure of getting all of the occult or visible tumor by removing the entire thyroid gland and doing a neck dissection on both sides. That means, of course, that a considerable operation must be done and that the patient will have to take thyroid for a long time, if not for life. Except in the cases in which there is true evidence or clinical evidence of involvement on both sides of the neck, I do not believe that that has been done in our Clinic. We have flirted with the idea

in some cases but have not come to deciding to do it. Then, when it appears in the lateral neck and in the homolateral lobe, there is the possibility of removing that lobe and at the same time inspecting the opposite lobe to see whether there is any detectable evidence of involvement, and doing a neck dissection on the side in which the lobe is involved. If it appears on one side of the neck first, we generally do a neck dissection on that side and take out the lobe on that side; I think that is probably good practice. One may later have to go back and take out more thyroid and more nodes on the other side, and occasionally such a patient will get a distant metastasis and die; in that case one regrets that he did not do the radical operation first. Our doubts about the justification of less radical procedures have arisen when patients have died with metastases or returned after fifteen or sixteen years with lots of other tumors in different parts of their necks. I cannot give a nice cut-and-dried conception of just exactly where we stand on the treatment of these tumors; we are still floundering about.

In discussing the treatment of papillary tumors of the thyroid and lateral neck, one has to consider radiotherapy because it is reputed that the papillary tumors of the thyroid and lateral neck are relatively radiosensitive. I recently attended a meeting at which three radiotherapists all expressed the opinion that as a matter of course the operation ought to be followed by postoperative radiotherapy. I can say only that we used to do that and have stopped doing it now because, in spite of rather heavy radiotherapy to the extent of damaging the skin of the neck, tumors have reappeared in remaining thyroid tissue or in the nodes in the lateral neck, right under the heavily irradiated area. I am not able to give the factors used in postoperative radiotherapy in other clinics.

In regard to the incidence of these papillary tumors, it may interest you to learn that at the Halloran Veterans Hospital in Staten Island, with which I am connected as a Consultant, during the first eighteen months of its existence as a Veterans Hospital there were fifteen cases (all male) of thyroid disease treated in that hospital. Seven of the fifteen had papillary tumors of the thyroid and three of them also of the lateral thyroids. This to me is a startling figure indeed and of course it does not represent anything like the true relationship of papillary thyroid tumors to thyroid disease in males.

DR. REGATO: The status of postoperative radiotherapy in carcinoma of the thyroid is much like that of postoperative radiotherapy in carcinoma of the breast, and its practice is advocated much by the same workers who are in favor of postoperative radiotherapy in the latter. We have not seen a great number of carcinomas of the thyroid, so we cannot speak with authority. I have treated occasional cases of carcinoma of the thyroid that were inoperable and they regressed to the point of clin-



Fig. 16. Metastatic tumor tissue from the humerus showing well differentiated thyroid cells with some tendency to form follicles. Magnified 260 times.

ical disappearance, recurring later slowly. I have always felt that five year statistics are of less value in carcinoma of the thyroid than in other tumors because of the slow rate of growth and frequent late recurrences; there lies the difficulty in establishing the value of postoperative radiotherapy.

There is in this audience a number of men who must have handled thousands of surgical specimens from the neck and who also have performed quite a number of autopsies. Would you care to request by a show of hands how many of them have ever seen grossly or microscopically any "normal" aberrant thyroid tissue from which the lateral "aberrant thyroid tumors" are supposed to arise?

DR. STOUT: I will hold up my hand, and so does Dr. Wheelock. How many have you seen?

DR. WHEELLOCK: Only two or three.

DR. STOUT: It is certainly a rare thing. I have seen a nontoxic nodular goiter in the lateral thyroid.

DR. WHEELLOCK: I notice that you have not mentioned blood vessel invasion in the diagnosis of carcinomas of the thyroid. I thought I recognized it in this particular section. Also, today is it not better to speak of these as straight out-and-out adenocarcinomas rather than as adenoma malignum? Is not that a term that is frowned upon now?

DR. STOUT: We had better reserve discussion of your second question for the next case. In regard to blood vessel invasion, in all kinds of tumors of endocrine organs it is certainly present in a great many, and if you wish to regard that as a criterion of malignancy, you will be more often right than wrong. I would say, however, that it is no indication of whether or not one may expect blood-borne metastases. I am certain that it occurs often in, for instance, the islet cell tumors of the pancreas and in the carotid body tumors without providing any viable distant metastases. It certainly does not mean the same thing as blood vessel invasion in tumors of nonendocrine glands.

DR. HARRISON BLACK, St. Louis: I would like to

ask you on what number of cases of lateral aberrant thyroid the figure of 12 per cent bad results was based; was it the original thirty-three cases?

DR. STOUT: Not all of those thirty-three cases have been followed for five years. It is based on only about twenty-two cases. Certainly, it is not a statistically important figure; nevertheless, it is interesting that it is so considerably smaller than for the total number of cases.

DR. BLACK: The point I wanted to ask about was the statistical significance on which you apparently have based your feelings about this lateral thyroid tumor, and I do not see with that small a number of cases that such a conclusion can be drawn.

DR. STOUT: It is true that one probably cannot draw an important conclusion. I think it only shows a trend—a peculiar trend. One would not expect to find that, for instance, in comparing the cases of carcinoma of the breast with and without metastases in the axillary nodes, even if one only had a small number of them. I am afraid one would get a trend representative of greater malignancy in the cases with metastases than in the cases without, would you not? However, I cannot defend such a small number of cases and, since you are probably right statistically, I will present these findings only as an observation and let you draw your own conclusions.

#### BIBLIOGRAPHY

- Crile, G., Jr.: Papillary Carcinoma of the Thyroid and Lateral Cervical Region, *Surg., Gynec. & Obst.* **85**:757-766, 1947.  
 Clay, R. C., and Blackman, S. S.: Lateral Aberrant Thyroid: Metastasis to the Lymph Nodes From Primary Carcinoma of the Thyroid Gland, *Arch. Surg.* **48**:223-228, 1944.  
 Horn, R. C., Jr.; Welty, R. F.; Brooks, F. P.; Rhoads, J. E., and Pendergrass, E. P.: Carcinoma of the Thyroid, *Ann. Surg.* **126**:140-155, 1947.  
 King, W. L. M., and Pemberton, J. deJ.: So-called Lateral Aberrant Thyroid Tumors, *Surg. Gynec. & Obst.* **74**:991-1001, 1942.  
 Frantz, V. K.; Quimby, E. H., and Evans, T. C.: Radioactive Iodine Studies of Functional Thyroid Carcinoma, *Radiology* **51**:532-552, 1948.

### Carcinoma (Adenoma Malignum Type) of Humerus, Metastatic From the Thyroid

*History* (presented by Everett D. Sugarbaker, M.D., Jefferson City).—For fifteen years prior to examination this 55 year old white woman had noticed a small mass on the lateral aspect of the left shoulder that until recently had been nonpainful. It gradually increased in size and for more than the last year the left arm had been useless. The patient also gave a history of goiter that had been present most of her life. Physical examination revealed a large mass in the left shoulder area, the perimeter of which measured 95 cm. The overlying skin was tense but there was definite fluctuation in some areas. In addition, the patient had a large goiter. X-ray of the left shoulder and arm showed destruction of the proximal two thirds of the humerus. Chest plate and skeletal series were negative. Following aspiration biopsy of the mass, an interscapulothoracic amputation was performed. The patient's postoperative course was uneventful.

ARTHUR PURDY STOUT, M.D.: *Microscopic Description* (fig. 16).—The section shows a tumor made up in part of glandular structures lined by cuboidal cells and in part by solid strands and small



masses of similar cells. The cells are not anaplastic and they vary somewhat in size, with either pale pink or somewhat deeper rose colored acidophilic granules. Mitoses are not apparent. The lumens of the gland spaces are usually either empty or contain a small amount of pale fragmented debris. After a considerable search it is possible to find some homogeneous pink material resembling colloid.

*Comment.*—There are many interesting features about this case. I suppose there will not be much dissent about the nature of this tumor; in my opinion it is an adenomatous carcinoma metastatic to bone and, although there is very little recognizable colloid, I believe it is safe to assume that the primary tumor is probably in the thyroid and belongs to that interesting variety of differentiated adenomatous cancers of the thyroid which used to be called by names like benign metastasizing goiter but are now generally classified as the adenoma malignum, or adenocarcinoma of the thyroid. Next to the papillary tumor, it is the most common variety of thyroid cancer. This is the tumor which specializes in bone metastases and one of the remarkable things about it is the fact that a patient may live for ten or more years with solitary or multiple bone metastases. Metastases also go to the lung and elsewhere but rather infrequently to lymph nodes, in contradistinction to the papillary tumors. In the group studied at the Presbyterian Hospital, 43.9 per cent of this type of cancer were either dead from cancer or alive with persisting disease at five years after treatment. Since this is a tumor of functional thyroid tissue it often will take up radioactive iodine. This can be used in tracer doses to aid in diagnosis, or it can be used therapeutically. At the present time, this form of therapy is being actively investigated but with rather meager results because there are so many factors which interfere with its successful use. Perhaps the most difficult aspect of diagnosis of this type of thyroid cancer comes when there is a tumor in the thyroid gland and no evidence of metastasis. If the tumor is made up of follicles which are at least in part anaplastic, the diagnosis can be made with assurance, but I know of no way in which it is possible to recognize a completely differentiated benign adenoma from the adenoma malignum type of cancer. Fortunately, this dilemma does not often afflict the pathologist. It is an argument, however, in support of the recommendation that all solitary thyroid nodules should be removed.

#### DISCUSSION

DR. STOUT: Having seen the illustrations and the involvement of the neck in that striking photograph of the patient, I think that those who made diagnoses of tumor other than the thyroid will probably be persuaded by the majority opinion that this is

a thyroid cancer which has metastasized to the bone. I have seen one patient with this disease, but she did not have such tremendous involvement. In the photograph of this case, one can see clearly the swelling of the neck.

DR. TAFT: In the section that I received, I do not remember seeing any colloid. I was convinced that this was a sweat gland tumor. I wonder if, other than the presence of colloid, there is any way of being sure that one is looking at one or the other.

DR. STOUT: That brings up the question of special stains. If I had thought it was a sweat gland carcinoma, I would have tried to see if I could not demonstrate mucin in the growth. I never saw a sweat gland carcinoma metastasize to bone. You may recall the fact that metastasizing sweat gland carcinomas are extremely rare.

DR. TAFT: I did not think it had metastasized; I thought it was just locally invasive.

DR. STOUT: Then let me say that a sweat gland carcinoma that demonstrated such a great degree of infiltrative growth is rare. Of the metastasizing tumors, when Gates, Warren and Warvi reported on their group, they said that they never had seen a metastasizing sweat gland carcinoma, and I think they could find reports of only four cases in the literature. I myself have seen four cases that metastasized and one case that invaded bone which was reported by Horn. So, I freely believe in the existence of sweat gland carcinomas, but I never saw one that closely imitated the appearance of the thyroid carcinomas.

DR. WHELOCK: Would you say why it is not a Hürthle cell adenocarcinoma? I made that particular diagnosis, and in my section the cells were fairly uniform, evenly stained, and for the most part, acidophilic.

DR. STOUT: I think the Hürthle cell tumors have smaller nuclei in respect to the size of the cell. The cell cytoplasm is quite voluminous in Hürthle cell tumors, and the acidophilic granules are quite striking, at least in the ones that I have seen. I was not impressed by that here. I might say that I have seen only one case of metastasizing Hürthle cell tumor and it did not metastasize to bone.

DR. ACKERMAN: Was the thyroid itself explored?

HORACE M. WILEY, M.D., *Jefferson City*: Unfortunately, the patient never returned for thyroidectomy, in spite of several letters of encouragement. I might add that the nodes in the axilla did not contain tumor.

#### BIBLIOGRAPHY

- Frantz, V. K.; Quimby, E. H., and Evans, T. C.: Radioactive Iodine Studies of Functional Thyroid Carcinoma, *Radiology* 51:532-552, 1948.  
Horn, R. C., Jr.; Welty, R. F.; Brooks, F. P.; Rhoads, J. E., and Pendergrass, E. P.: Carcinoma of the Thyroid, *Ann. Surg.* 126:140-155, 1947.  
Lahey, F. H.; Hare, H. F., and Warren, S.: Carcinoma of the Thyroid, *Ann. Surg.* 112:977-1005, 1940.  
Gates, O.; Warren, S., and Warvi, W. N.: Tumors of Sweat Glands, *Am. J. Path.* 19:591-631, 1943.

## PRESIDENT'S PAGE

April is Cancer Control Month, so designed by Congressional Resolution and Presidential Proclamation.

The basic objectives of the American Cancer Society fall into two categories: first, the development and support of an integrated program of research from which must come the discovery of the causes of cancer and its corollary, more effective methods of treatment and even prevention; and second, full mobilization of all resources now available for the earlier detection, diagnosis and treatment of cancer.



Early detection depends in the first instance on public education. Individuals must themselves make the decisions that take them to a physician. In its drive for early diagnosis the American Cancer Society emphasizes the value of periodic physical examinations and the significance of cancer danger signals, symptoms that may mean cancer is present and should always be the occasion for a visit to a physician.

Once the patient goes to his doctor the decisions on which life depends must be made by the medical profession. From a suspicion of the presence of malignant disease to definite diagnosis, from the planning of a program of therapy to its execution, no single step in cancer control is easy.

April is a time when physicians, health officers and practicing physicians on the front-line fight against cancer, the specialists in their chosen field, and other trained workers, can be of special help to cancer control.

*Wallis Smith.*



# THE JOURNAL

of the

Missouri State Medical Association

623 Missouri Bldg. Telephone: Newstead 0404-05

Subscription . . . \$3.00 a year in advance

*Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent.*

APRIL, 1949

## EDITORIALS

### THE COMMITTEE OF 53 PHYSICIANS

A meeting took place in Chicago at the American Medical Association headquarters on February 12 of representatives from all state medical associations. Carl F. Vohs, M.D., St. Louis, and the Executive Secretary attended the meeting.

At this meeting, the public relations firm of Whitaker and Baxter outlined the plan of campaign which is to be followed in order to educate the people in the advantages of the present system of voluntary medical care as compared to compulsory methods.

It was pointed out that this is an affirmative campaign. An all out effort is to be made to enroll the people in sound voluntary health insurance systems. The campaign is to be a broad public campaign—with leaders in every walk of life participating—not just a doctor's campaign.

#### THE STATE MEDICAL ASSOCIATION JOB

Each state medical association is asked to work out the following four essential points:

1. An effective state-wide endorsement drive.
2. An intensive publicity campaign.
3. An adequate pamphlet distribution system.
4. Provide an energetic, carefully managed speakers' bureau.

Two large national organizations already have adopted resolutions condemning compulsory health insurance. These are the American Bar Association and the American Farm Bureau Federation.

#### THE COUNTY MEDICAL SOCIETY JOB

Every county medical society in Missouri should adopt a resolution against compulsory health insurance and should send copies of the resolution to

- a. President Truman.
- b. The two Missouri United States Senators.
- c. The Representative in Congress from the respective district.
- d. The State Medical Association office.
- e. State legislators from the respective district.
- f. The American Medical Association office at 1302 18th St., N. W., Washington, D. C.

Copies of the resolution to Congressmen and Sen-

ators should be accompanied by a letter signed by the County Medical Society President asking for a reply, so that the legislator's position can be made known to the doctors of his district.

#### THE DOCTOR'S JOB

The individual doctor's job in this campaign is of paramount importance.

The American Medical Association and the state and county medical societies can provide an effective framework for the campaign, but every doctor who values his freedom in practice needs to work at keeping that freedom by crusading every day of the week.

Doctors, who have devoted their lives to fighting physical ills, must do double duty until this issue is resolved—and help in treating the ills of the body politic.

Every doctor needs to talk to every patient who is able to listen—and tell him the truth about political medicine, how it destroys the quality of medical care, how it breaks down the physician-patient relationship, how it raids the pocketbook of every taxpayer, and how it threatens personal freedom.

Every doctor, too, needs to encourage patients to get good, sound voluntary health insurance for their own protection and the protection of their families.

The doctor's job in the campaign will be more fully outlined in a special pamphlet which will be mailed direct to every member of the American Medical Association throughout the nation.

No group of men can reach the people of America more quickly or effectively than the doctors of America—and doctors can cure this sickness, if they fight it as they would any other plague which threatened their country or community.

This is an emergency.

### MEDICAL CARE COSTS COMPARED WITH COST OF LIVING INDEX

Costs of medical care have not risen as fast as the cost of living, a comparison of the 1948 *Consumers' Price Index* with a preliminary index of medical care prices of the U. S. Bureau of Labor Statistics shows. Estimates from the U. S. Bureau figures indicate that the index of medical care items will stand at 141 for 1948, according to Frank G. Dickinson, Ph. D., director of the Bureau of Medical Economic Research of the American Medical Association, in an article in *The Journal of the American Medical Association* of February 26.

The final report of the U. S. Bureau of Labor Statistics places the *Consumers' Price Index* for 1948 at 171.2. The base period 1935-1939 equals 100 in computing the entire index, of which the index of medical care items is a part.

Preliminary figures of the Bureau of Labor Statistics for costs of medical care in 1948 are:

General practitioners' services, 136; surgeons' and specialists' services, 136; dental care, 146; eye-glasses, 124; hospital rates, 212; and prescriptions and drugs, 122.

Figures of the Bureau of Labor Statistics for these items in 1947 were 130.3; 129.4; 137.4; 118.6; 179.6; and 115.4, respectively. The entire cost of living index for 1947 was 159.2.

"The most significant change is in hospital rates, which soared from 179.6 in 1947 to 212 in 1948," Dr. Dickinson comments.

"Prices for laboratory and other services rendered by hospitals are not sampled; hence the hospital index covers primarily room rates. The hospital is uniquely exposed to the forces of inflation. It buys goods and services and sells services soon after purchase. Its costs are not stabilized by such customary accounting items as depreciation and taxes because most hospitals are public institutions.

"Hence the changes in current prices of food and fuel and in hourly wage rates are potent in changing hospital room rates charged to patients because there are no other costs of importance.

"The sharp increase in the index of hospital room rates for 1948 over 1947 reflects to some extent the failure of hospitals to raise their rates earlier. The recent decline in prices of farm products has not yet materially reduced the operating costs of hospitals."

The estimates should "set at rest a good many wild and irresponsible statements about the exorbitantly high prices being paid for medical care," adds an editorial appearing in the same issue of *The Journal*.

## NEWS NOTES

Mark M. Marks, M.D., Kansas City, appeared before high school students and a woman's organization at Odessa on February 16 and spoke on "Voluntary vs. Compulsory Health Insurance." He spoke before a civic group in Higginsville on the same subject in the evening.

William W. Hart, M.D., Kansas City, spoke before the Missouri Association for Social Welfare on February 16 and discussed "The Mentally Ill: Their Care and Treatment in Missouri."

C. M. Waugh, M.D., and J. M. Davis, M.D., Tarkio, were recipients of the Tarkio Rotary Club's Buck of the Month award on February 1. The awards were given "for faithful and meritorious service to our community."

J. F. Harrison, M.D., Mexico, served as head of a committee to present to the voters of Mexico facts on the city manager form of government in preparation for an election on March 1.

E. D. Imes, M.D., Maryville, was guest speaker in February before a dinner meeting of the Mary-

ville Business and Professional Women's Club. He discussed "Socialized Medicine and New Trends of Medicine."

Glenn W. Hendren, M.D., Liberty, has been named a member of the Board of Curators of the University of Missouri for a six year term.

R. C. Newkirk, M.D., Joplin, was the speaker at the February monthly meeting of the staff nurses of St. John's Hospital, Joplin.

William J. Shaw, M.D., Fayette, was elected president of the Missouri Academy of General Practitioners at a meeting in Mexico on February 13. Other officers elected were Robert C. McElvain, M.D., St. Louis, president-elect; M. B. Casebolt, M.D., Kansas City, vice president; W. W. Tillman, M.D., Boliver, secretary; Kenneth Glover, M.D., Mount Vernon, treasurer.

J. W. Gardner, M.D., Glasgow, was the speaker at a dinner meeting of the Glasgow Rotary Club on February 17 and spoke on "Socialized Medicine."

Jacob Kulowski, M.D., St. Joseph, was the guest speaker at the February meeting of the First District, Missouri Nurses' Association in St. Joseph on February 8. He spoke on "Prevention of Automobile Accidents."

Duff S. Allen, M.D., St. Louis, spoke at a weekly meeting of the Webster Groves Optimist Club on February 9 on "Socialized Medicine."

Dr. Esther Lucile Brown, director of a recent study of the nursing profession by the Russell Sage Foundation, will speak on "Nursing for the Future" at commencement exercises of the St. Louis City Hospital and Homer G. Phillips Hospital schools of nursing on May 12, 8:00 p.m., at Kiel Auditorium, St. Louis.

Physicians who have appeared recently on programs of component medical societies under the auspices of the Committee on Postgraduate Course follow:

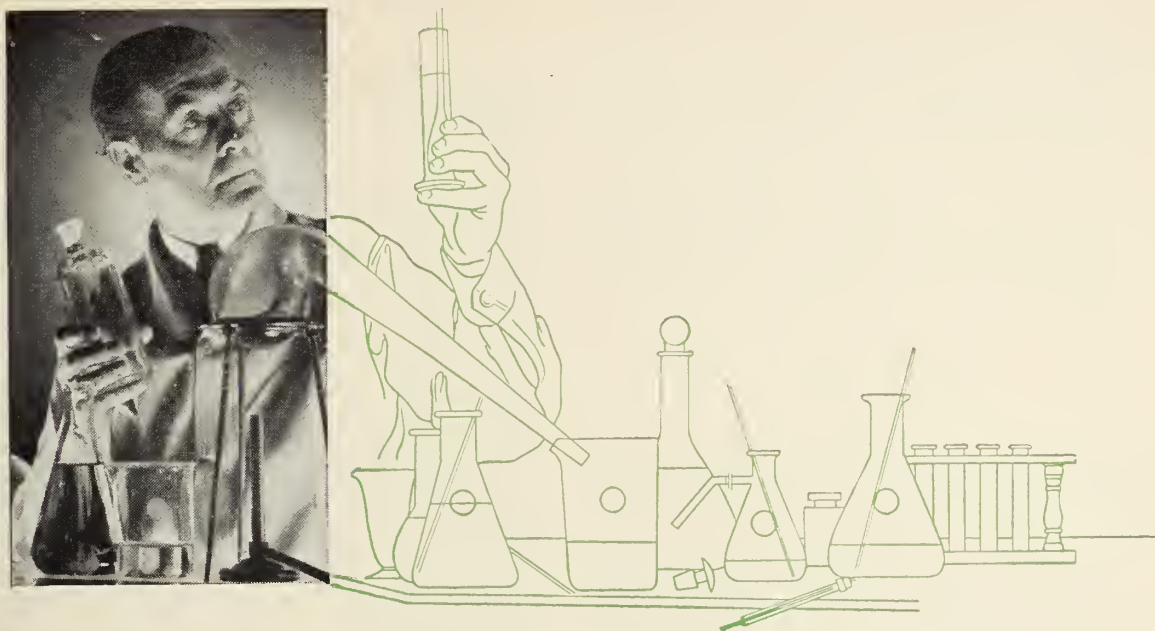
Robert O'Brien, M.D., St. Louis, spoke at a meeting of the Fifth Councilor District at Jefferson City on "Low Back Pain."

Daniel L. Sexton, M.D., St. Louis, spoke at a five county joint dinner meeting at Wentzville on "The Use and Abuse of Sex Hormones" and at a meeting of the Cole County Medical Society at Jefferson City on the same subject.

B. Landis Elliott, M.D., Kansas City, spoke at a ten county joint dinner meeting at Chillicothe on "Diagnosis and Treatment of Early Neurosis."

H. Haffner, M.D., St. Louis, spoke at a meeting





# Dorsey

REFINING THE TOOLS TO DO THE JOB

While medical men are occupied with enlarging their knowledge of disease and treating its manifestations, the makers of ethical drugs concentrate on developing and improving the "tools" to facilitate treatment.

Toward that end, the Smith-Dorsey Company has expanded its research facilities, secured increased research grants and added research personnel.

Our objective—tools worthy of *the finest* workman . . .

THE SMITH-DORSEY COMPANY • Lincoln, Nebraska

BRANCHES AT LOS ANGELES AND DALLAS



MANUFACTURERS OF  
AQUEOUS SUSPENSION OF ESTROGENIC SUBSTANCES • DORSEY  
AMINOPHYLLINE SUPPOSITORIES • DORSEY

of the Fifth Councilor District at Jefferson City on "Parenteral Fluids" and at a dinner meeting of the Phelps-Crawford-Dent-Pulaski County Medical Society on the same subject.

Eugene Bricker, M.D., St. Louis, spoke at a five county joint dinner meeting at Wentzville on "Diagnostic Problems of the Acute Abdomen."

A. Graham Asher, M.D., Kansas City, spoke at an eighteen county joint dinner meeting at Clinton on "The Management of Congestive Heart Failure."

T. H. Stubbs, M.D., Columbia, Dean, University of Missouri Medical School, spoke at a meeting of the Fifth Councilor District at Jefferson City on "Doctors in the Doghouse."

Kenneth E. Cox, M.D., Kansas City, spoke at a ten county joint meeting in Chillicothe on "Office Management in Retroversion."

William A. Knight, Jr., M.D., St. Louis, spoke at a dinner meeting of the Phelps-Crawford-Dent-Pulaski County Medical Society on "Liver and Pancreatic Disease."

Alvin E. Vitt, M.D., St. Louis, spoke at a meeting of the Cole County Medical Society on "The Management of Common Prostatic Conditions."

Paul Murphy, M.D., St. Louis, spoke at a meeting of the Phelps-Crawford-Dent-Pulaski County Medical Society on "Recent Advances in the Diagnosis and Management of Some Pulmonary Diseases."

Arthur Neilson, M.D., St. Louis, spoke at a meeting of the Chariton-Macon-Monroe-Randolph County Medical Society on "Diagnosis and Treatment of the Common Skin Disorders."

J. C. Edwards, M.D., St. Louis, spoke at a meeting of the St. Francois-Iron-Madison-Washington-Reynolds County Medical Society on "Diabetes Mellitus."

Robert W. Bartlett, M.D., St. Louis, spoke at a meeting of the Cole County Medical Society on "The Differential Diagnosis and Treatment of Pain in the Right Upper Abdomen."

O. P. Hampton, Jr., M.D., St. Louis, spoke at a meeting of the Chariton-Macon-Monroe-Randolph County Medical Society on "Diagnosis and Treatment of Common Traumatic and Static Foot Conditions."

William J. Shaw, M.D., Fayette, spoke to a group of fifty physicians at a joint dinner meeting of eighteen county societies at Clinton on February 17.

Robert Mueller, M.D., St. Louis, addressed a joint dinner meeting of ten county medical societies at Chillicothe on March 3 on "A Challenge to Medicine."

Robert McElvain, M.D., St. Louis, spoke at a meeting of the Jefferson County Medical Society

at Crystal City on March 4 on "The Missouri Academy of General Practice."

## MUSINGS OF THE FIELD SECRETARY

Approximately 150 interns, residents and senior medical students of Greater St. Louis attended a panel discussion on "Rural Medical Practice" in the St. Louis Medical Society banquet room on February 21. The meeting was sponsored by the Committee on Rural Medical Service of the Missouri State Medical Association in cooperation with the St. Louis City and St. Louis County medical societies for the purpose of presenting to these young physicians an actual picture of rural practice as can be visualized from a down to earth explanation of the factors involved by a group of physicians personifying this type of practice.

The evening began with a buffet supper which put those present in the right frame of mind, for the time being at least, to forget the Ivory Tower specialization influence and explore that vast intriguing phase of medicine, rural practice. Following the dinner, Dr. J. W. Thompson, President of the St. Louis Medical Society, and Chairman of the Council of the Association, opened the discussion by giving a brief explanation of the purpose and hoped for outcome of the meeting and then introducing a number of guests, two of whom were Miss Amy Kelly and Mr. B. W. Harrison of the Agricultural Extension Service, College of Agriculture, University of Missouri.

The meeting then was turned over to Dr. Robert Mueller, President of the Association, and his panel of six rural Missouri practitioners. Dr. Mueller, acting as moderator, asked for questions from the audience pertaining to rural practice and called on members of the panel to answer from their personal experiences and observations. There was no evidence of bashfulness from the standpoint of asking questions, even pointed ones. Likewise, there was no evidence of hesitancy on the part of the panel in giving answers.

Many more questions were asked than could be discussed in the time allotted of one and one half hours. So much interest was manifest that following the close of the formal panel discussion many of those present grouped around individual members of the panel and continued their course in rural practice far into the night.

An invitation was extended to all in attendance to visit the Association headquarters office and look over the information concerning locations for practice in Missouri which is kept up to date for the benefit of both those seeking suitable locations and those communities seeking physicians.

Members of the discussion panel included Drs. Edward O. Damron, Elsberry; J. W. Well, Palmyra; Martin M. Hart, Salem; F. R. Crouch, Farmington; Henry Durst, Fulton, and J. W. Fleming, Jr., Moberly.

This type of endeavor is certainly not the answer to the solution of the problem of more doctors for rural Missouri but from the comments of many of the interns, residents and senior medical students who participated and those who have visited the Association office since the meeting, it represents a step in the right direction. They say—"Let's have more of the same thing."



## ORGANIZATION ACTIVITIES

### COMMITTEE ON CONSERVATION OF EYESIGHT

The following resolution was adopted by the Committee on Conservation of Eyesight at a meeting of the Committee on February 13.

Inasmuch as some criterion of competency of ophthalmologists must be recognized if the quality of the eye care of the citizens of our state be safeguarded, the Committee on Conservation of Eyesight accepts that this qualification must be certification by the American Board of Ophthalmology.

Complaints have been made to the Committee that individuals who have applied for certification have on occasions been unfairly treated; it has been charged that the examinations have not been impartial; that there was confusion among the examiners, and that there has been summary refusal to allow certain ophthalmologists in the state to present themselves for examination on the grounds of insufficient preparation.

It is not within the province of the Committee to judge such matters but a service can be rendered to the public as well as to our colleagues if we are able to assist all ophthalmologists of the state to obtain certification.

The Committee offers on request, and in confidence, to mediate with the American Board of Ophthalmology on behalf of any of our colleagues who desire certification but have had difficulty in trying to obtain it.

The Committee will serve as an information and advisory center in regard to opportunities for further specialized study in ophthalmology necessary to prepare prospective candidates, and will prepare a statewide list of ophthalmologists who will be advised of matters of interest such as graduate courses, study groups and general and specialized society meetings of ophthalmic import. Be it

Resolved, That the Committee invite all ophthalmologists who desire certification to contact the Committee for assistance toward this end, and that copies of this resolution be sent to all ophthalmologists of the state as well as be published in THE JOURNAL.

## DEATHS

**Cook, Thomas F., M.D.**, Richmond, a graduate of St. Louis University School of Medicine, 1918; Fellow of the American Medical Association; member of the Ray County Medical Society; aged 57; died February 6.

**Buhman, Rudolph, M.D.**, St. Louis, a graduate of the Marion-Sims College of Medicine, 1894; Fellow of the American Medical Association; member of the St. Louis Medical Society; aged 77; died February 14.

**Hall, Darwin Walton, M.D.**, Kansas City, a graduate of the University Medical College of Kansas City, 1896; Affiliate Fellow of the American Medical Association; honor member of the Jackson County Medical Society; aged 76; died March 3.

# MILWAUKEE SANITARIUM

WAUWATOSA, WISCONSIN

## FOR NERVOUS DISORDERS

Maintaining the highest standards for more than a half century, the Milwaukee Sanitarium stands for all that is best in the care and treatment of nervous disorders. Photographs and particulars on request.

(Chicago Office— 1117 Marshall Field Annex  
Wednesday, 1-3 P. M.)

JOSEF A. KINDWALL, M.D.  
CARROLL W. OSGOOD, M.D.  
WILLIAM T. KRADWELL, M.D.  
BENJAMIN A. RUSKIN, M.D.  
LEWIS DANZIGER, M.D.  
RUSSELL C. MORRISON, M.D.  
G. CHARLES SUTCH, M.D.  
RAYMOND HEADLEE, M.D.  
ARTHUR J. PATEK, M.D., *Consultant*

G. H. SCHROEDER, *Business Manager*

COLONIAL HALL—One of the 14 Units in "Cottage Plan."



**COUNTY SOCIETY HONOR ROLL 1949**

(Societies which have paid Dues for All Members and date placed on Honor Roll)

Miller County Medical Society, December 8, 1948.  
Camden County Medical Society, December 10, 1948.  
Benton County Medical Society, December 14, 1948.  
Ste. Genevieve County Medical Society, December 16, 1948.  
Laclede County Medical Society, December 18, 1948.  
Dallas, Hickory, Polk Counties Medical Society, December 23, 1948.  
Carter-Shannon County Medical Society, December 30, 1948.  
Lewis, Clark, Scotland Counties Medical Society, January 3, 1949.  
Audrain County Medical Society, January 5, 1949.  
Webster County Medical Society, January 8, 1949.  
Harrison County Medical Society, January 10, 1949.  
Mississippi County Medical Society, January 12, 1949.  
Howard County Medical Society, January 15, 1949.  
Henry County Medical Society, January 16, 1949.  
Morgan County Medical Society, January 19, 1949.  
Callaway County Medical Society, January 21, 1949.  
Carroll County Medical Society, January 24, 1949.  
Pettis County Medical Society, January 26, 1949.  
Holt County Medical Society, January 29, 1949.  
Cape Girardeau County Medical Society, February 1, 1949.  
Bates County Medical Society, February 8, 1949.  
Mercer County Medical Society, February 8, 1949.  
Pike County Medical Society, February 9, 1949.  
Clinton County Medical Society, February 15, 1949.  
St. Francois-Iron-Madison-Washington-Reynolds Counties, February 18, 1949.  
Montgomery County Medical Society, February 24, 1949.  
South Central Counties Medical Society, February 28, 1949.

**MISCELLANY**

**AMERICAN MEDICAL ASSOCIATION PROVIDES  
\$25,000 TO SET UP CHRONIC ILLNESS  
COMMISSION**

Carrying out another of the objectives of the American Medical Association's twelve point program for the advancement of medicine and public health, the Board of Trustees has made available \$25,000 to set up the Commission on Chronic Illness.

The sum, drawn from the American Medical Association's national education campaign fund, was allotted to the Interim Commission on Chronic Illness, which will set up the permanent commission. The American Medical Association also has provided office space at its Chicago headquarters to the permanent commission,

representing voluntary agencies, government agencies and the public.

Purpose of the commission will be to promote programs for the control of chronic illness in every state. The program listed "Provision of facilities for care and rehabilitation of the aged and those with chronic disease."

The patient with chronic illness is one of the major challenges to modern society. Sooner or later some form of long term illness affects one or more members in most families of the nation. A conservative estimate suggests that more than one sixth of the population is afflicted with some chronic disease. Approximately 2,000,000 persons in the United States are chronic invalids at the present time, and the number is steadily increasing.

The commission is a joint project of the American Medical Association, the American Hospital Association, the American Public Health Association, and the American Public Welfare Association, and was recommended by the Section on Chronic Disease of the National Health Assembly.

Dr. James R. Miller, Hartford, Conn., member of the Board of Trustees of the American Medical Association, is chairman of the Interim Commission and will be a member of the permanent commission of approximately thirty.

The permanent commission will include also representatives of the general public, education, churches, hospitals and medicine, agriculture, labor, management, public health, psychiatry, journalism, nutrition, and economics and sociology.

The Interim Commission has suggested the following objectives for the permanent commission:

1. To modify the attitude of society that chronic illness is hopeless; to substitute for the prevailing over-concentration on provision of institutional care a dynamic program designed to prevent chronic illness, to minimize its disabling effects, and to restore its victims to a socially useful and economically productive place in the community.

2. To clarify the problems arising from chronic illness among all age groups, with full realization of its social as well as its medical aspects.

3. To coordinate separate programs for specific diseases with a general program designed to meet more effectively needs which are common to all the chronically ill regardless of the cause or causes of their illness.

4. To clarify the inter-relationship of professional groups and agencies now working in the field.

5. To stimulate in every state and locality a well rounded program for the prevention and control of chronic diseases and for the care and rehabilitation of the chronically ill.

Proposed activities of the permanent commission are:

1. To assemble existing data in order to evaluate and make use of all that is now available and to determine areas requiring further study.

2. To serve as a clearing house for information on laws, programs, experiments, and new developments; to keep all interested groups informed through a newsletter published regularly; and to publish special reports from time to time.

3. To stimulate the development of new methods and techniques in the organization and administration of services for the chronically ill.

4. To develop suggested patterns for integrated community programs.





by far the most potent  
**ORAL ESTROGEN**  
available clinically

In exceedingly minute doses—as little as 0.02 mg. (1/3200 gr.) daily—ESTINYL\* maintains the average menopausal patient free of symptoms. Even when initiating therapy and in the more severe cases, unusually small dosage—measured in hundredths of a milligram—has been found effective.

**ESTINYL**



(ETHINYL ESTRADIOL)

ESTINYL, a derivative of the ovarian follicular hormone, estradiol, evokes the sense of well-being characteristic of natural hormone therapy. It acts rapidly, often completely controlling climacteric symptoms within a few days. In therapeutic dosage side effects are notably infrequent. Unique response to minimal dosage permits effective estrogen therapy at low cost to patients.

**DOSAGE:** One ESTINYL Tablet (0.02 mg.) or one teaspoonful of ESTINYL LIQUID (0.03 mg.) daily, may be prescribed, reducing dosage as symptoms subside.

**ESTINYL** Tablets, 0.02 (buff) or 0.05 mg. (pink), in bottles of 100, 250 and 1000.

**ESTINYL LIQUID**, 0.03 mg. per 4 cc. (teaspoonful), in bottles of 4 and 16 oz.

\*®

*Schering*

CORPORATION • BLOOMFIELD, NEW JERSEY  
IN CANADA, SCHERING CORPORATION LIMITED, MONTREAL

ESTINYL



5. To establish criteria for the appraisal of state and local chronic disease programs and facilities.

6. To give consultation to private and public state, regional, and local agencies interested in planning for the chronically ill.

7. To suggest priorities for the determination of immediate as against long range needs for the guidance of state and local communities.

8. To explore methods of implementing the recommendations made by the commission.

9. To prepare a report to the American people outlining a comprehensive plan for the prevention and control of chronic disease and for the care and rehabilitation of the chronically ill.

### THE CURRENT STATUS OF ROUTINE CHEST X-RAYING IN GENERAL HOSPITALS OF THE UNITED STATES

The x-raying of general hospital admissions started in 1935 when the Wisconsin General Hospital and the University Hospital in Michigan began x-raying all admissions for a trial period. In 1938 no hospital was taking chest films of all patients but by 1943, 56 teaching hospitals professed to be taking routine chest x-rays and in 1945 8 per cent of general hospitals indicated that they were taking routine films.

#### *The Current Survey*

When information on the subject was sought in the spring of 1948, the data available from groups such as the National Tuberculosis Association, the Public Health Service, the American Hospital Association and the Veterans Administration were incomplete. It was decided, therefore, to proceed with an independent survey which, even if incomplete, might show trends and supplement the information already at hand.

It seemed wisest to seek information from the State Health Departments, 42 of which now have Tuberculosis Divisions and Control Directors, many of whom are working closely with the Public Health Service. Miraculously, reports were received during August, 1948 from every one of the 48 states. Additional help was received from physicians and from officials of tuberculosis associations.

A brief questionnaire was used to obtain the data and to explain the purpose of the survey. One question was stressed as being most important—"Which general hospitals in your state are now taking routine chest x-rays of all admissions?" Other questions were aimed at finding out whether plans were under way for an increased use of the method; what size film was being used; who paid for the original equipment and for maintenance; and whether cost data were yet available.

The term "general hospital" was used advisedly. There were 6,276 registered hospitals in the United States in 1947, of which 4,539 were general in type; specialty and federal hospitals were excluded. The patients of general hospitals, moreover, included 93 per cent of the 15,829,514 patients admitted to all hospitals, even though they had only 42 per cent of the bed capacity. It is this population—14,665,000 patients, plus another huge number of outpatients each year—which it would be most logical to examine routinely, and about which we would like to know.

Of the 4,539 general hospitals in the United States,

247 replied that they were taking routine chest x-rays. Several additional hospitals stated that they had plans and equipment for starting such a program. The equipment for routine chest x-rays was provided by the hospital in 33 instances; by the state for 110 hospitals, by the federal government for 49 and by the city and county for four. The funds for equipment for 40 hospitals were supplied by tuberculosis associations. The survey was supported by the hospital in 92 instances, by the state in 59, and by the city or county in 11. All or part of the cost was borne by the tuberculosis association in nine instances and by a direct charge to the patient in 20 instances.

The best data for costs in a large-scale operation and the best evidence that a low cost is possible come from the Johns Hopkins Hospital. The operating expense for a 70 mm. unit, including all factors, was 34 cents per patient when 1,400 films a month were taken, and 25 cents when 2,100 were taken. In community-wide surveys, which compete in some ways with hospital surveys, the Public Health Service has found the usual cost to be about 55 cents per person.

The actual efficiency of the method in the hospitals is highly variable. The term "routine" is a misnomer. Factors which contribute to this partial usage include difficulties of administration, technical inconvenience, lack of an interested director, opposition of staff members, and the exclusion of certain patient groups (infants, obstetrical patients, very ill patients, surgical patients and private patients). Administration is a more difficult obstacle than the cost of equipment. Since the actual efficiency of the camera film, the 4 by 5 film, the 14 by 17 single film, and paper x-rays is said to be practically the same, cost and convenience are the real criteria for choice.

#### *Summary and Conclusions*

A survey has been made to determine the current use of routine chest x-rays in general hospitals of the United States. State Boards of Health were used as the principal source of information. Two hundred and forty-seven of the 4,539 general hospitals in the United States are reported to have a program in action. Numerous other hospitals have equipment or plans for starting a program. The number of hospitals now taking routine films is double the number said to be doing so in 1945. Few of the hospitals include all of their patients in these "routine" surveys. Use of the method must be extended to more hospitals, and to more of the registrants of the hospitals if it is to approach its real value. The source of funds for equipment is largely civic, with voluntary groups giving valuable assistance. The "drive" has come from federal, voluntary, and hospital groups. Funds for maintenance of routine x-raying come from both subsidies and charges. Not enough data are available yet to determine the cost of taking the various kinds of x-rays under the diversity of conditions. Charges, where made, are not yet based on an accurate estimation of costs. There is evidence that costs may be decreased. Lack of funds, lack of information, inertia, and the chores of administration are the barriers to wider usage of the method. For each of these problems, there seems to be a solution.

*The Current Status of Routine Chest X-raying in General Hospitals of the United States, William H. Oatway, Jr., M.D., Arizona Medicine, January, 1949.*





**"FOR ME  
ALWAYS"**

## Because DARICRAFT

1. is EASILY DIGESTED
2. has 400 U. S. P. Units of VITAMIN D per pint of evaporated milk.
3. has HIGH FOOD VALUE
4. has an IMPROVED FLAVOR
5. is HOMOGENIZED
6. is STERILIZED
7. is from INSPECTED HERDS
8. is SPECIALLY PROCESSED
9. is UNIFORM
10. will WHIP QUICKLY

**PRESCRIBED BY MANY DOCTORS**  
... You also may want to utilize Daricraft as a solution to your infant feeding problems, as well as in special diets for convalescents.

**PRODUCERS CREAMERY CO., SPRINGFIELD, MISSOURI**



From where I sit  
*by Joe Marsh*

## Get The Truth!

*Called on my good friend "Cappy" Miller, who edits the County Bee, just the other day. And hanging up on the wall of Cappy's office I noticed this slogan for his paper:*

*"Remember there are always two sides to every question. Get both sides. Then be truthful."*

*A good slogan . . . not just for a newspaper—for people, too. Because there'll always be two sides to every question: the side of those who vote one way, and those who vote another—the side of those who enjoy a temperate beverage like beer or ale, and of those who swear by nothing but cider.*

And from where I sit, once you've got both sides—and faced them truthfully, you realize that these differences of opinion are a precious part of what we call Democracy—the right of the individual to vote as he believes, to speak his mind, to choose his own beverage of moderation, whether beer or cider.

*Joe Marsh*

## BOOK REVIEWS

**PIONEER LIFE IN KENTUCKY.** By Daniel Drake, M.D. Edited from the original manuscript, with introductory comments and a biographical sketch by Emmet Field Horine, M.D. 1948. Henry Schuman. New York. Price \$4.00.

I think that my first interest in pioneer life in Kentucky began when I was about seven years old and received a set of Lincoln Logs for Christmas. For some time thereafter sufficient Indians, from Pocohontas to Sitting Bull, lurked behind the chairs of the living room to have overpopulated the entire Western Hemisphere, while the Great Emancipator and I split enough logs and built enough log cabins to have solved any number of housing problems. A more accurate picture, however, is presented in Daniel Drake's "Pioneer Life in Kentucky."

This book, written by one of the leading medical educators of the Midwest, is composed of a series of letters addressed to his children, concerning recollections of his boyhood, from the time of his arrival in Mayslick, Kentucky, as an infant, until he went to Cincinnati, Ohio, at 15 years of age to be "transmuted" into a doctor under the tutelage of Dr. William Goforth, the leading physician of that city.

While there are practically no references to medicine in the book, beyond an occasional mention of a lecture that the writer had given or someone that he had met or dined with, it does give a good picture of society in the Post-Revolutionary period in Kentucky. The Indians and wild animals are present, particularly in the early part of the book. Domestic activities such as churning, spinning, and weaving are described. Agricultural methods are given in considerable detail, as are cabin construction, hunting, quilting parties, education, cornhusking bees, and traveling.

The letters composing the book are well written, with less effort to make the author the hero of every occasion than usual, and the footnotes are explanatory without being obtrusive. The format is well set up and the illustrations look like something from the old family album.

M. E. H.

**YOU AND YOUR DOCTOR, A Frank Discussion of Group Medical Practice and Other Modern Trends in American Medicine.** By Benjamin F. Miller, M.D., Clinical Professor of Medicine, George Washington Medical School; Research Associate in Medicine, National Research Council; formerly associated with the University of Chicago Clinics and the United States Public Health Service. Whittlesey House, McGraw-Hill Book Company, Inc., New York. Toronto. 1948. Price \$2.75.

In the introduction to his book, "You and Your Doctor," Dr. Benjamin F. Miller states that his purpose is "to help create better understanding of the many problems, old and new, that face my profession." To this end he starts with a description of a day in the life of a general practitioner, who must know "less and less about more and more," and who fails to give his patients adequate treatment because of limitations of time, facilities, training and postgraduate education. Next, he advances to the specialist, who gives his patients inadequate care because he knows "more and more about less and less," and regards the sufferer only in the light of his specialty rather than as an integrated whole. Then the author presents a somewhat idyllic picture of

group practice, under the leadership of a "pilot physician," who has had three years of training in surgery, internal medicine, and the various specialties, including a year of psychosomatic medicine and psychiatry.

Dr. Miller continues with such specific problems as the modern hospital, control of communicable and preventable disease, mental hygiene, periodic physical checkups, medical education, medical research and a national disaster service. He appears to feel that all of the problems involved in these, as well as the proper distribution of medical care, could be solved by public support in the form of a national health plan, financed by compulsory health insurance, and administered by the Public Health Service.

This is a readable little book, written in terminology easily comprehensible to the layman, and with many case histories and examples cited to lend interest to the text. The chapter on postmortems is particularly good. However, I feel that it fails to give the private practitioner and hospital sufficient credit for the work they are doing under a system of free enterprise, and that it might well undermine some of the confidence that the reader feels in his own physician.

M. H.

**HISTOPATHOLOGIC TECHNIC.** By R. D. Lillie, M.D., Medical Director, U. S. Public Health Service; Chief, Pathology Laboratory, National Institute of Health. Blakiston Company. Philadelphia and Toronto. 1948. Price \$4.75.

This book concerns itself in considerable detail with experiences in histopathologic technic. It is written in standard textbook fashion beginning with a discussion concerning equipment utilized in the pathologic laboratory, and then special chapters are devoted to fixation of tissues, sectioning, staining, and mounting procedures.

The subsequent chapters of the book, each being separate, devote themselves to a discussion of staining techniques for various types of tissues, enzymes, bacteria, parasites and pigments both exogenous and endogenous. And there is a small chapter devoted to special injection procedures.

The book is well written, concise and clear. Most of the methods which are recommended in the book are ones which have stood the test of time and are well accepted.

The book is a valuable one for the pathologist and for the tissue technician.

A. E. U.

**OPHTHALMOLOGY IN THE WAR YEARS.** Edited by Meyer Wiener, M.D., Professor of Clinical Ophthalmology, Washington University School of Medicine; Honorary Consultant in Ophthalmology, Bureau of Medicine and Surgery, United States Navy. Volume II (1944-June, 1946). Year Book Publishers, Inc. Chicago. 1948. Price \$16.00.

The second volume of this résumé of articles published in the ophthalmologic literature from 1944 to June 1946, follows the format of Volume I with but few changes. The chapter on "Aqueous Humor" edited by Jonas S. Friedenwald has been deleted and has been included in the chapter on "General Pathology and Bacteriology" by the Irvines. Several chapter headings have been added: "Chemical Warfare Agents," "Corneal Epithelium," in which most articles stress the slowing of healing in the corneal epithelium by most of the anesthetics and astringents. The antibiotics do not limit cell mitosis.



# COSMO CAUTERY COMPANY

4215 Virginia Ave. St. Louis 11, Mo.

Established 1936

## CERVIX COAGULATOR



Actual Size  $9\frac{5}{8}$  Inches

Only \$26.50  
Complete

## The Cervix Coagulator

For the treatment of endocervicitis, cervical cysts, cervical erosions.

## The Cosmo Cautery Unit

For the removal of superficial skin blemishes, warts, moles, skin tabs.

Doctors report gratifying results with these compact, easy to operate units. Offer most gentle yet effective treatment. Patient discomfort at a minimum. Complete units include all parts illustrated and handsome leatherette covered carrying case.

## Outstanding Features

1. Compactness and simplicity of operation
2. Can be used on 110 AC or DC current
3. Fingertip control switch
4. Results free of stenosis and scar tissue
5. Work may be done in office
6. No anesthesia required
7. No sparks or cherry red heat
8. Interchangeable silver applicators
9. Controlled low heat, eliminating nauseating smoke and odor of searing tissue
10. Noiseless, no radio interference

These instruments are guaranteed for one year against defective material or workmanship by the Cosmo Cautery Co.

## COSMO CAUTERY UNIT



Actual Size  $6\frac{3}{8}$  Inches

Only \$22.50  
Complete

## Write Your Surgical Dealer For Descriptive Literature

A. S. ALOE CO.  
1831 Olive Street  
St. Louis, 3, Mo.

A. S. ALOE CO.  
Bryant Building  
Kansas City, Mo.

HAMILTON-SCHMIDT SURGICAL CO.  
215 North Tenth Street  
St. Louis, 1, Mo.

EDMUND F. HANLEY MEDICAL EQUIPMENT CO.  
1021 N. Grand Avenue  
St. Louis, 6, Mo.

CHARLES A. SCHMIDT INSTRUMENT CO.  
3689 Olive Street  
St. Louis, 8, Mo.

A new chapter on the "Relation of the Eye to E. N. T." is most welcome. All in all, these volumes are useful and it seems it would be worth while continuing every two or three years. The exhaustive bibliographies alone make the work commendable. The volumes are well printed on non-glossy paper and the print is quite plain. The well chosen editors have all written in a clear and interesting style and Dr. Wiener and his editorial staff are to be complimented on a work well done. A. E. E.

**MICROBIOLOGY AND PATHOLOGY.** By Charles F. Carter, M.D., Instructor in Pathology and Applied Microbiology, Parkland Hospital School of Nursing, Dallas, Texas; Director, Carter's Clinical Laboratory, Dallas, Texas; Consulting Pathologist, St. Louis Southwestern Railway Hospital, Texarkana, Arkansas; Consulting Pathologist, Mother Frances Hospital, Tyler, Texas. With 216 Text Illustrations and 25 Color Plates. Fourth Edition. C. V. Mosby Company. St. Louis. 1948. Price \$5.00.

The primary purpose of the book is that of teaching nurses and is well set up with this end in view. Somewhat more than half of the book is devoted to bacteriology and parasitology. The early chapters are devoted to history, sterilization, disinfection and general technic. Subsequent chapters discuss in a somewhat brief manner, bacteriology, chiefly as it is related to the field of medicine. Some attention is given to virus diseases. The latter part of the text deals in a most elementary manner with a few fundamental pathologic principles and processes, as well as introducing, in a small way, the subject of tumors.

From the point of view of the nursing profession it presents the material in a clear, concise, well organized manner and lends itself admirably as a textbook for nurses as an introduction to microbiology and pathology. M. L. J.

**CORRELATIVE NEUROANATOMY.** By Joseph J. McDonald, M.D.; Joseph G. Chusid, M.D., and Jack Lange, M.D. Fourth Edition, Revised. 60 Illustrations. University Medical Publishers. Palo Alto, California. 1948. Price \$3.00.

This 150 page manual is a student's outline of the fundamental principles of neuroanatomy, neurophysiology, neuropathology and organic neurology, unusually well organized and correlated so as to help the student understand and learn neurology based on anatomy and pathology rather than by memorizing various reflexes and syndromes.

It is presented in outline form with underscoring of important passages so that it can be read rapidly for reviewing purposes; on the other hand it contains such a wealth of material and an abundance of excellent schematic drawings that it also can suffice for many hours of intense study.

The fourth edition varies relatively little from the third. The chapters on neuroanatomy naturally are unchanged, and the sections on principles of neurodiagnosis and diseases of the central nervous system have been reorganized and more recent data added. The standard sensory charts of segmental cutaneous innervation unfortunately remained unchanged; these certainly bear revising in the light of present clinical knowledge of segmental nerve distribution.

On the whole this is an excellent handbook for quick reference concerning any neurologic problem that might present itself to the practicing physician. W. P. W.

**TREATMENT IN GENERAL PRACTICE.** By Harry Beckman, M.D., Professor of Pharmacology, Marquette University School of Medicine, Milwaukee, Wisconsin. Sixth Edition. W. B. Saunders Company. Philadelphia and London. 1948. Price \$11.50.

This single volume deals with more than just treatment. There is considerable written about the symptomatology, pathology and diagnosis of the various diseases. For example, there is a nine page discussion of malaria preceding the treatment. Nineteen additional disease entities are included in the 6th edition.

Many newer drugs and methods of therapy have been added. Not only are the most accepted modes of treatment discussed but other more controversial methods, new and old, are presented. A few of these are intravenous procaine in serum sickness and asthma, urethane B-methylcholine chloride following vagotomy, diisopropyl-fluorophosphate in myasthenia gravis, the antihomophilic globulin, the Pitkin-heparin menstrum, insulin "NPC 50," and dihydroergotamine in migraine.

The reader feels that Dr. Beckman's review of the literature up to and including the year of 1947 has been extensive. Throughout the discussion reference is given to quote articles, and these are easily found in the bibliography condensed in the back of the book and consisting of sixty-six pages. The index adequately covers diseases, symptoms and drugs.

This single volume is recommended as a valuable reference, not only to the general practitioner, but to the specialist as well. J. B. W.

**PSYCHIATRY IN GENERAL PRACTICE.** By Melvin W. Thorner, M.D., Assistant Professor of Neurology, The Graduate School of Medicine, University of Pennsylvania. W. B. Saunders Company. Philadelphia, London. 1948. Price \$8.00.

This book is a superb production both as to manner and matter. The case method of presentation is used and with eminent success, the cases being skillfully selected and illustrating the various points perfectly. Excellent judgment is shown in weighing and presenting the many controversial and, to the uninitiated, indefinite aspects of psychiatry. The language is clear and concise and flows so smoothly that in reading one is carried along as in fiction. Those new to the subject will have no trouble in following the meaning. No practitioner or medical student should be without the book.

It is perhaps unfortunate that the old error occurs of using the term "confusion" for both organic and functional states, which have little in common except the word loosely employed. This fault has been the source of much real confusion in thinking in the course of investigations over many years. C. J. S.

**DIABETES MELLITUS IN GENERAL PRACTICE.** By Arthur R. Colwell, M.D., Associate Professor of Medicine and Director of Medical Specialty Training, Northwestern University Medical School; Attending Physician, Evanston Hospital, Evanston, Ill.; Consulting Physician, Wesley Memorial Hospital, Chicago. Year Book Publishers, Inc. Chicago. 1947. Price \$5.25.

The book is written in the standard textbook fashion consisting, first, of a "General Introduction to the Characteristics of Diabetes" with remarks pertaining to the history of the disease, "Etiology and Pathogenesis," and a discussion of "Symptoms and Their Use" in judging the severity of this particular disease.



# MR. BRUNCHER IS A DONUT-MUNCHER

Skip breakfast? Not Bruncher.

Not if you consider coffee-and at 10 a.m.

as breakfast, that is. Of course, this kills his appetite for lunch, but he can always make that up by an afternoon visit to the cruller counter, which kills his appetite for dinner . . .

And thus does Bruncher meal-skimp his way to a subclinical vitamin deficiency.

Your own experience with these half-sick, half-well cases indicates that the first and wisest move is dietary reform. And isn't it also wise to prescribe, *additionally*, a vitamin supplement—to assure adequate intake just in case a patient strays from the prescribed diet?

For your prescribing convenience, there's an Abbott vitamin product to answer nearly every vitamin need—

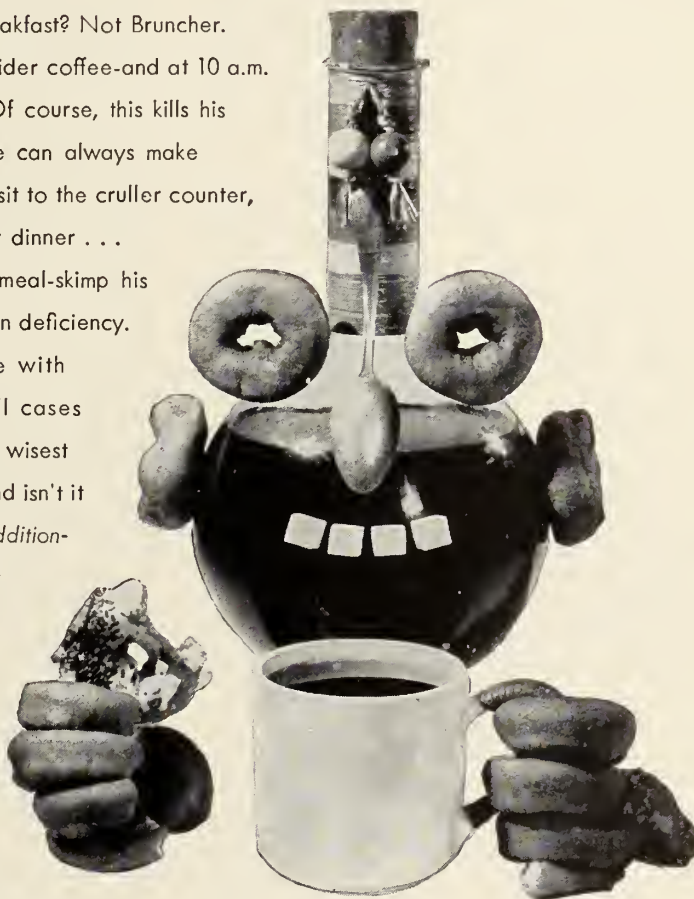
for supplementary or therapeutic levels of dosage, for oral or parenteral administration. All are rigidly standardized to conform with label listings.

**S P E C I F Y**

They are available at pharmacies everywhere.

ABBOTT LABORATORIES, North Chicago, Illinois.

ABBOTT VITAMIN PRODUCTS



There then follows a series of chapters, each complete, and can be read without having to refer to other portions of the book. The chapters as they are presented consist, first, of one devoted to "Diagnosis," then followed by a chapter on "Treatment," a discussion of insulin and its modifications, treatment of insulin and complications of diabetes both acute and chronic types.

The book is well written and presented. A. E. U.

#### TECHNIQUE OF TREATMENT FOR THE CEREBRAL PALSY CHILD.

By Paula F. Egel, Cerebral Palsy Director, Children's Hospital, Buffalo, New York. Introduction by Winthrop M. Phelps, M.D., Medical Director, Children's Rehabilitation Institute, Baltimore, Maryland. Appendix by Moir P. Tanner, F.A.C.H.A., Superintendent, Children's Hospital, Buffalo, New York. Drawings by Dorothea Mintline. The C. V. Mosby Company. St. Louis. 1948. Price \$3.50.

The book deals with a method of physiotherapy, not a "technique of treatment"; it does not touch upon orthopedic, operative or other measures. The various types of massage and exercises expounded seem to be valuable enough in themselves; but one gains the impression that as the author advocates their application, they are overdone. Physiotherapy doubtless serves somewhat to help contractures and loosen up muscles and joints but its value is limited. There is no use of spending hours and days at this sort of thing. Further the author presents a scheme for recording the state of contracture, spasticity and such. Now this is no constant factor. While the patient is at ease and relaxed, the muscles and joints are quite flexible usually but as he attempts some movement, the spasticity and athetosis begin to manifest themselves and vary in degree in proportion to the effort.

The spastic patient almost invariably improves as he grows older, even up to adult life. A certain amount of physiotherapy and training will help at all ages but they must be in proportion to the patient's capacity to benefit.

L. B. A.

**HANDBOOK OF ORTHOPAEDIC SURGERY.** By Alfred Rives Shands, Jr., M.D., Medical Director of the Alfred I. duPont Institute of the Nemours Foundation, Wilmington, Delaware; Visiting Professor of Orthopedic Surgery, University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania. In collaboration with Richard Beverly Raney, M.D., Associate in Orthopedic Surgery, Duke University School of Medicine, Durham, North Carolina; Lecturer in Orthopedic Surgery, University of North Carolina School of Medicine, Chapel Hill, North Carolina. Illustrated by Jack Bonacker Wilson. Third Edition. C. V. Mosby Company. St. Louis. 1948. Price \$6.00.

The book contains 579 pages, with index of authors and subjects and a good bibliography, enabling an interested reader to find easily more detailed information about nearly any subject. This alone is most valuable.

The introductory pages present briefly the beginning and progress of orthopedic surgery, with a definition of the subject, and its scope. The general consideration of bone and joint affections is outlined through etiology and pathologic changes in bones and joints, then physical diagnosis and, lastly, of course, treatment.

The contents with introduction include twenty-four chapters; two on congenital deformities; one each on affections of growing and adult bone; two on non tuber-

culous infections of bones and joints; two on the various types of arthritis; three on neuromuscular diseases; one on tumors; one each on fracture deformities and body mechanics; affections of the spine and thorax use two chapters; those of the hip, knee and ankle one chapter each. Chapter twenty-three is given to the neck and shoulder, with the final one devoted to elbow, wrist, hand and jaw.

As stated in the preface, much work was involved and many helpers made it possible to complete in so few pages so much real information.

The illustrations, while not attractive, are all good and examples of the special subject. The entire book is a desirable one to have and would be a useful one in the library of the general practitioner and pediatrician.

As a textbook for the medical student, it is quite desirable since the important facts are concisely and thoroughly enunciated.

C. A. S.

**A-B-C'S OF SULFONAMIDE AND ANTIBIOTIC THERAPY.** By Perrin H. Long, M.D., F.R.C.P., Professor of Preventive Medicine, The Johns Hopkins University School of Medicine; Physician, The Johns Hopkins Hospital. W. B. Saunders Company, Philadelphia & London. 1948. Price \$3.50.

This is a concisely prepared handbook outlining the current information on the therapy of infectious diseases.

Alphabetical arrangement of the contents facilitates its value as a quick reference source. However, interspersing of specific infectious diseases with various system diseases is somewhat confusing. The author comments freely on the course and complications of each disease thus imparting to the book the flavor of a pocket book of medicine rather than a purely therapeutic manual. Nor does he limit his text only to those diseases helped by this type of therapy, thus presenting valuable negative as well as positive information. This book should be currently of great value to the practitioner.

C. J. S.

**COMMUNAL SICK CARE IN THE GERMAN GHETTO.** By Jacob R. Marcus, Ph.D., Adolph S. Ochs Professor of Jewish History, Hebrew Union College. The Hebrew Union College Press. Cincinnati. 1947. Price \$2.50.

This book is the initial volume of a series of the Ella H. Philipson Memorial Publications and constitutes an authoritative account of an extensive bibliography pertaining to the care of the sick in the German lands of the late medieval period. Those years of 1500 to 1800 constituted an age of "political disability and social degradation" for the German Jew and it is during this hectic period that the author traces the efforts of that people in caring for the many social needs of the "Ghetto." The Ghetto in its fullest sense connotes the legally constituted and self contained Jewish quarter of those communities throughout the Holy Roman Empire.

The Ghetto was not alone self-sufficient in caring for the needs of the sick, but conducted its own courts, its own philanthropies and many other political machinations. The care of the sick was not alone limited to issuance of medicaments and the services of the barber and surgeon, but also spiritual, social and religious ministrations, with evolution during this period of years leading to the development of well organized hospitals and public health agencies. The auxiliary services of pharmacy, bath houses (physiotherapy), nursing and care of the dead developed hand in hand. Subsidies of



the indigent sick were prevalent in all communities, the better class being more often cared for at home during illness. In each community the services were rendered by the "Hebra Kaddisha," a single "Holy Brotherhood" or a series of such pious groups, each devoting its efforts to a single aspect of the care of the ill. The development of female societies, auxiliary to these groups, led to nursing care and various youth movements sprang up with their organizations devoted to the rendering of charitable services to their own age groups.

The book provides extensive appendices and a complete bibliography affording many references to one deeply interested in the evolution of medical care and charitable organization.

P. L. B.

#### SYNOPSIS OF PSYCHOSOMATIC DIAGNOSIS AND TREATMENT.

By Flanders Dunbar, M.D. With the assistance of Jacob Arlow, M.D., Raymond Hussey, M.D., Bertram Lewin, M.D., Robert C. Lowe, M.D., Sydney Rubin, M.D., E. Schneider, M.D., Lester W. Sontag, M.D., and Members of the Staff of the Departments of Medicine and Psychiatry, Columbia-Presbyterian Medical Center, New York City. C. V. Mosby Company. St. Louis. 1948. Price \$6.50.

This is an extensive and able work dealing with the psychosomatic conception, in the strict sense, not as a loose synonym for the neuroses as is so commonly the case. The psychosomatic idea is a new psychiatric approach. It studies the mental situation associated with many physical disorders—in this book some being mucous colitis, ulcerative colitis, psoriasis, glaucoma, disorders of the teeth, diabetes, obesity, arthritis, heart disease, tuberculosis, gynecologic disturbances and colds, as well as the more usual asthma, hyperthyroidism and gastric ulcer. The thought is that there may be an etiologic connection in the shape of a local nervous tension and resulting congestion or something of the sort. Besides the author, a number of other workers have contributed chapters.

The value of the conception remains doubtful; the subject is still in the realm of theory. In this book one would wish for more definite evidence and less suggestion, association, possibility and hypothesis. But of course one should be open minded with novel concep-

tions and allow time to determine the issue. There is probably less enthusiasm for the conception than the author, who is really the force carrying the psychosomatic movement forward, professes to believe. Many still confuse the idea with a new approach to the neuroses, which it seems scarcely to be.

**YOUR BABY, THE COMPLETE BABY BOOK FOR MOTHERS AND FATHERS.** By Gladys Denny Shultz, Contributing Editor, Ladies' Home Journal, and Lee Forrest Hill, M.D., Former President, American Academy of Pediatrics. Photography by Joseph Di Pietro. Line Drawings by Reisie Lonette. Doubleday & Company. Garden City, N. Y. 1948. Price \$3.50.

One wonders whether this book should be reviewed by an expert or a neophyte in the care and problems of a baby. Having just become a father, this surgeon was confronted by the many details and same helpless questions with which the average layman would plague his pediatrician. It is quite complete in covering everything from the time pregnancy is first suspected, through birth, infancy and up to the child reaching school age. It is written in an easy conversational style, discussing the information the expectant mother should know and what the proud father should do. It contains many life photographs and drawings to illustrate the care and development of the baby. It has several pages devoted to each month of the first year of the child, explaining the feeding and psychologic development and problems.

This book stresses that the paternal as well as the maternal parent has something to contribute to the bringing up of an infant. The phases of physical and mental growth and development of personality are well covered. This book would be a nice gift to "new" parents in that it supplements professional advice. There are pages for making a permanent record of the baby's birth and development. The proud parent can refer to this to learn when his baby first showed indications of the nervous and mental development of his genius. There probably are many books which deal with the baby quite thoroughly. This one discusses latest approved ideas in prenatal care, feeding, training, development, handling illnesses, recipes and child guidance through infancy to school age; and is well worth the listed price.

L. H. P.



## The Mary E. Pogue School

Complete facilities for training Retarded and Epileptic children educationally and socially. Pupils per teacher strictly limited. Excellent educational, physical and occupational therapy programs.

Recreational facilities include riding, group games, selected movies under competent supervision of skilled personnel.

Catalogue on request.

G. H. Marquardt, M.D.    Barclay J. Macgregor  
Medical Director                      Registrar

27 Geneva Road, Wheaton, Illinois  
(Near Chicago)

## ACCIDENT · HOSPITAL · SICKNESS

**INSURANCE**

For Physicians, Surgeons, Dentists Exclusively



<b>\$5,000.00 accidental death</b>	<b>\$ 8.00</b>
\$25.00 weekly indemnity, accident and sickness quarterly	
<b>\$10,000.00 accidental death</b>	<b>\$16.00</b>
\$50.00 weekly indemnity, accident and sickness quarterly	
<b>\$15,000.00 accidental death</b>	<b>\$24.00</b>
\$75.00 weekly indemnity, accident and sickness quarterly	
<b>\$20,000.00 accidental death</b>	<b>\$32.00</b>
\$100.00 weekly indemnity, accident and sickness quarterly	

Also Hospital Expense for Members  
Wives and Children

85c out of each \$1.00 gross income used for  
members' benefit

<b>INVESTED ASSETS</b>	<b>PAID FOR CLAIMS</b>
<b>\$300,000.00</b>	<b>\$15,000,000.00</b>

\$200,000.00 deposited with State of Nebraska  
for protection of our members.

Disability need not be incurred in line of duty—benefits  
from the beginning day of disability

**PHYSICIANS CASUALTY ASSOCIATION**

**PHYSICIANS HEALTH ASSOCIATION**

46 years under the same management

400 First National Bank Building, OMAHA 2, NEBR.

## All worth while laboratory examinations; including—

Tissue Diagnosis

The Wassermann and Kahn Tests

Blood Chemistry

Bacteriology and Clinical Pathology

X-Ray including Gastro-Intestinal Study and  
Gall Bladder Visualization

Basal Metabolism

Pregnancy Test

Electrocardiograms with interpretation

## National Pathological Laboratory

RALPH L. THOMPSON, M.D., Director

601-616 University Club Bldg.

ST. LOUIS

Telephone JEFFerson 6088

# proved by test and taste

## IN PROTEIN SUPPLEMENTATION



**TESTS** demonstrate: high biological value in growth studies; all recognized essential amino acids provided in significant quantities.

**TASTE** and adaptability to a variety of vehicles ensure patient-acceptance.

Particularly valuable when the patient has difficulty in utilizing adequate amounts of protein from natural food sources such as may occur at times in pregnancy and lactation, gastrointestinal disorders, convalescence, diarrhea in children, chronic malnutrition, and in aged patients.

**THE ARLINGTON CHEMICAL COMPANY**  
YONKERS 1 NEW YORK





## if she is one of your patients...

...She depends on your help for a speedy return to gainful occupation. Women seeking employment who are nervous, apprehensive and generally distressed by symptoms of the climacteric, may find it difficult to meet competition. "Premarin" offers a solution. Many thousand physicians prescribe this naturally-occurring, oral estrogen because...

1. Prompt symptomatic improvement usually follows therapy.
2. Untoward side-effects are seldom noted.
3. The sense of well-being so frequently reported tends to quickly restore the patient's confidence and normal efficiency.
4. This "Plus" (the sense of well-being enjoyed by the patient) is conducive to a highly satisfactory patient-doctor relationship.
5. Four potencies provide flexibility of dosage: 2.5 mg., 1.25 mg., 0.625 mg. and 0.3 mg. tablets; also in liquid form, 0.625 mg. in each 4 cc. (1 teaspoonful).



While sodium estrone sulfote is the principal estrogen in "Premarin," other equine estrogens...estrodial, equilin, equilenin, hippulin...ore probably also present in varying amounts as water-soluble conjugates.

# "PREMARIN"



ESTROGENIC SUBSTANCES (WATER-SOLUBLE)  
also known as CONJUGATED ESTROGENS (equine)

**Ayerst, McKenna & Harrison Limited** 22 East 40th Street, New York 16, New York

# Goose? or Nest?

## WHICH WILL YOU HAVE ?

**For some reason**, the goose egg stands for zero . . . nothing.

The nest egg, however, stands for a tidy sum of money, set aside for your own or your children's future.

It's hardly necessary to ask you which you'd prefer.

But it *is* necessary to ask *yourself* what you are doing to make sure you *don't* end up with a goose egg instead of a nest egg ten years from now.

The simple, easy, and obvious thing to do is to buy U. S. Savings Bonds.

Buy them regularly, automatically, on a

plan that pays for them out of the month-to-month income you make today.

Millions of Americans have adopted this practically painless way to save up a nice nest egg for the needs and wants of the future.

In 10 years they get back \$40 for every \$30 invested in U. S. Savings Bonds—bonds as safe and solid as the Statue of Liberty.

There's a special Savings Bond Plan for *you*. Ask your employer or banker about it today . . . and get started now.

You'll soon realize it's one of the most important and comforting things you ever did!

## Automatic saving is sure saving—U.S. Savings Bonds



Contributed by this magazine in co-operation with the Magazine Publishers of America as a public service.

Ad No. 415-C



WALKING COMFORT ASSURED IN

**LIMBS by ISLE**

*The* **W. E. ISLE**  
*Company*

ENTIRE SECOND FLOOR  
1121 GRAND AVE.  
KANSAS CITY, MO.  
VICTOR 2350

## Mullen Ambulance Company

PRIVATE AMBULANCE  
SERVICE

Local and Distant Trips  
Day or Night

5159 Delmar, ST. LOUIS Forest 1913

The Neurological Hospital,  
2625 The Paseo, Kansas City,  
Missouri. Operated by the Rob-  
inson Clinic, for the care and  
treatment of nervous and men-  
tal patients and associated  
conditions.

## FAITH HOSPITAL

A. J. SIGNORELLI, M.D.,  
*Medical Director*

GOodfellow 6262

2800 N. Taylor, St. Louis, Mo.



One of Four Main Buildings

## GLENWOOD SANITARIUM

A Private Hospital for Care of Nervous and Mental Disorders, Alcohol and Narcotic Addictions.

Thoroughly equipped for all the approved therapeutic measures. Insulin, metrazol and electro shock used in selected cases.

Four main buildings for patients permit ample classification facilities. Large grounds composed of about fifty acres make many out-of-door activities possible.

Phone WEBster 1056

Visiting Consultant  
W. W. GRAVES, M.D.  
Visiting Neuropsychiatrist  
SYDNEY B. MAUGHS, M.D.

Medical Superintendent  
PAUL HINES, M.D.  
Resident Physicians  
RICHARD J. HESSBERG, M.D.  
LEROY J. DIERKER, M.D.

For full information, address

PAUL HINES, M.D., Medical Superintendent, Webster Groves, St. Louis 19, Mo.



## UNSCENTED COSMETICS

**FOR THE ALLERGIC PATIENT**

AR-EX Cosmetics are the only complete line of unscented cosmetics regularly stocked by pharmacies. To be certain that your perfume sensitive patients do not get scented cosmetics, prescribe AR-EX Unscented Cosmetics. SEND FOR FREE FORMULARY.



**AR-EX**

**FREE FORMULARY**

DR. \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
CITY \_\_\_\_\_  
STATE \_\_\_\_\_

**AR-EX COSMETICS, INC.,**

**1036 W. VAN BUREN ST.,**

**CHICAGO 7, ILL.**

## **RADIUM** (including Radium Applicators) **FOR ALL MEDICAL PURPOSES** *Est. 1919*

### **QUINCY X-RAY & RADIUM LABORATORIES**

(owned and directed by a Physician-Radiologist)

**W. C. U. Bldg.**

**HAROLD SWANBERG, B.S., M.D., Director**

**QUINCY, ILLINOIS**

## **HAMILTON-SCHMIDT SURGICAL COMPANY**

*St. Louis, Missouri*

**{ Surgical Instruments, Invalid and Sick Room Supplies }**  
**{ Post-Operative Belts, Elastic Hosiery and Trusses Fitted }**

**Central 1680**

**REGISTERED NURSE IN ATTENDANCE 215 North Tenth Street**



## **THE WALLACE SANITARIUM**

**MEMPHIS, TENNESSEE**

*For the Diagnosis and Treatment of  
Nervous and Mental Diseases, Drug Addiction and Alcoholism*



## Cook County Graduate School of Medicine Announces Continuous Courses

**SURGERY**—Intensive Course in Surgical Technique, two weeks, starting April 18, May 16, June 20. Surgical Technique, Surgical Anatomy & Clinical Surgery, four weeks, starting April 4, May 2, June 6.

Surgical Anatomy & Clinical Surgery, two weeks, starting April 18, May 16, June 20.

Surgery of Colon & Rectum, one week, starting April 11, May 16, June 13.

Esophageal Surgery, one week, starting June 13.

Thoracic Surgery, one week, starting June 20.

Breast & Thyroid Surgery, one week, starting June 27.

**GYNECOLOGY**—Intensive Course, two weeks, starting April 18, June 20.

Vaginal Approach to Pelvic Surgery, one week, starting April 4, May 16, June 13.

**OBSTETRICS**—Intensive Course, two weeks, starting April 4, May 16.

**MEDICINE**—Intensive Course, two weeks, starting June 13.

Electrocardiography & Heart Disease, two weeks, starting July 18.

Gastroenterology, two weeks, starting June 27.

Personal Course in Gastroscopy, two weeks, starting May 16, June 13.

**PEDIATRICS**—Intensive Course, two weeks, starting April 4.

Diagnosis & Treatment of Congenital Malformations of Heart, two weeks, starting June 13.

**DERMATOLOGY**—Formal Course, two weeks, starting May 2.

Informal Clinical Course every two weeks.

**CYSTOSCOPY**—Ten Day Practical Course every two weeks.

**UROLOGY**—Intensive Course, two weeks, starting April 18.

General, Intensive and Special Courses in All Branches of Medicine, Surgery and the Specialties

**Teaching Faculty**—Attending Staff, Cook County Hospital  
**Registrar**, 427 South Honore St., Chicago 12, Ill.

## E & J Folding WHEEL CHAIRS

Used by thousands for  
TRAVEL, WORK, PLAY



FOLDS  
TO 10  
INCHES



Everest & Jennings folding Wheel Chairs are **LIGHTEST AND STRONGEST** of all! They fold compactly for travel, work, play. Beautifully designed of chromium plated tubular steel. Insist on a genuine E & J Lightweight Wheel Chair. America's finest.

**EVEREST & JENNINGS** Dept. 71

761 NORTH HIGHLAND AVENUE • LOS ANGELES 38, CALIF.

## DIGILANID...

*crystalline complex*

*of whole leaf*

The dependable action of the total glycosides of *Digitalis lanata* whole leaf is provided by DIGILANID®, crystalline complex of lanatosides A, B and C, in regulated percentages.

Possessing the additional advantages of uniform potency, stability and virtual freedom from impurities, DIGILANID may be regarded as "crystalline whole leaf."

## DIGILANID

Tablets • Liquid • Ampuls • Suppositories



**dependable and potent**

*Originality • Elegance • Perfection*

**SANDOZ PHARMACEUTICALS**  
Division of SANDOZ CHEMICAL WORKS, INC.  
NEW YORK 14, N.Y. • CHICAGO 6, ILL. • SAN FRANCISCO 8, CAL.

## COMMERCIAL ANNOUNCEMENTS

**WANTED:** M. D. trained in Obstetrics and Pediatrics to join new clinic now being organized—central Iowa town of 7,500—new air conditioned ground floor offices. Address Box 163, Missouri State Medical Association, 623 Missouri Bldg., St. Louis 3, Mo.

**FOR SALE OR LEASE:** Well established general practice of 40 years, fully equipped modern office. Prosperous community, good hospital facilities nearby. Property of deceased physician. Write Mrs. C. H. Bulkley, LaPlata, Missouri.

**FOR SALE:** X-Ray, instruments, and a supply of medicine left by the late Dr. M. B. Barber. A list will be mailed or you may see these by communicating with Mrs. M. B. Barber, 219 South Main Street, Fredericktown, Mo.

**WANTED:** Excellent blood chemist and medical technician; good working conditions, fully equipped office, top salary according to qualifications. Address Drs. Asher & Steffen, 1220 Professional Bldg., Kansas City, Mo.

**AVAILABLE APRIL 1, 1949:** One accepted Rotating Residency. One accepted Rotating Internship available July 1, 1949. 213 bed Massachusetts Hospital. Definite teaching program with salary and maintenance. Grade A graduate only. Address Box 165, Missouri State Medical Association, 623 Missouri Bldg., St. Louis 3, Mo.



**Inorganic and Organic Chemicals**  
**Biological Stains • Solutions**  
**Chemical Indicators • Test Papers**

*Distributed by*  
**Physician and Laboratory Supply Houses**

**The COLEMAN & BELL COMPANY, Inc.**  
MANUFACTURING CHEMISTS      NORWOOD, OHIO, U. S. A.

**COLEMAN & BELL** *Norwood, Ohio*

**Hair Permanently Removed by Electrolysis**  
**DOROTHY WORRELL, R.N.**  
**233 Vandeventer, St. Louis**  
**Telephone, Jefferson 9436**  
*Work Done on Prescription of Physicians Only*

**THE STOKES SANITARIUM** 923 Cherokee Road, Louisville, Kentucky

Our ALCOHOLIC treatment destroys the craving, restores the appetite and sleep, and rebuilds the physical and nervous condition of the patient. Liquors withdrawn gradually; no limit on the amount necessary to prevent or relieve delirium.

MENTAL patients have every comfort that their home affords.

The DRUG treatment is one of gradual Reduction. It relieves the constipation, restores the appetite and sleep; withdrawal pains are absent. No Hyoscine or rapid withdrawal methods used.

NERVOUS patients are accepted by us for observation and diagnosis as well as treatment.

E. W. STOKES, Medical Director. Established 1904  
 Telephone—Highland 2101

## INDEX TO ADVERTISERS

Abbott Laboratories .....	305
Ames Company, Inc. ....	240
Ar-Ex Cosmetics, Inc. ....	312
Arlington Chemical Co. ....	308
Ayerst, McKenna & Harrison, Ltd. ....	309
Bilhuber-Knoll Corp. ....	246
Borden Company .....	Insert
Camel Cigarettes .....	245
Camp, S. H., & Co. ....	242
Coleman & Bell Co. ....	314
Cook County Graduate School of Medicine.....	313
Cosmo-Cautery Co. ....	303
Duncan Laboratories .....	315
Everest & Jennings .....	313
Faith Hospital .....	311
Glenwood Sanatorium .....	311
Gradwohl Laboratories .....	254
Hamilton-Schmidt .....	312
Hanger, J. E., Inc. ....	254
Isle, W. E., Co. ....	311
Lilly, Eli, & Co. ....	Insert
Lov-e Brassiere Co. ....	248
Major Clinic .....	241
Mead Johnson & Co. ....	316
Medical Protective Co. ....	254
Milwaukee Sanitarium .....	297
Mullen Ambulance .....	311
National Pathological Laboratories .....	308
Norbury Sanatorium .....	246
North Shore Health Resort .....	250
Parke, Davis & Co. ....	238, 239
Physicians Casualty Assn. ....	308
Pogue, Mary E., School .....	307
Producers Creamery Co. ....	301
Quincy X-Ray & Radium Labs. ....	312
Ralph Sanitarium .....	252
Rexair Division, Martin-Parry Corp. ....	250
Robinson Clinic, Inc. ....	311
Sandoz Chemical Works .....	313
Schering Corporation .....	299
Schmid, Julius, Inc. ....	285
Searle, G. D., & Co. ....	283
Smith-Dorsey Co. ....	295
Squibb, E. R., & Sons .....	243
Stokes Sanitarium .....	314
Swift & Company .....	251
Upjohn Company .....	287
U. S. Brewers Foundation, Inc. ....	301
U. S. Savings Bond .....	310
Wallace Sanitarium .....	312
Wander Company .....	253
Winthrop-Stearns, Inc. ....	247
Worrell, Dorothy .....	314
Wyeth, Inc. ....	249



*Your* **LABORATORIES**  
*Our* **RESPONSIBILITY**

CLINICAL PATHOLOGY  
PATHOLOGIC ANATOMY

**DUNCAN LABORATORIES**


*Established 1924*

909 Argyle Bldg. **KANSAS CITY 6, MO.**  
230 Frisco Bldg. **JOPLIN, MISSOURI**

RALPH EMERSON DUNCAN, M.D.

MAURICE L. JONES, M.D.

In addition to diagnostic laboratory services, chemically accurate and clinically tested reagents, solutions, stains and culture media are available for immediate delivery.



This baby's mother learned about Mead's Oleum Percomorphum from her physician, not from public advertising or displays.

*"Servamus Fidem"*

## HOW much sun does the infant really get?

*Not very much:* (1) When the baby is bundled to protect against weather or (2) when shaded to protect against glare or (3) when the sun does not shine for days at a time. Mead's Oleum Percomorphum is a prophylactic against rickets available 365 $\frac{1}{4}$  days in the year, in measurable potency and in controllable dosage. *Use the sun, too.*

Mead Johnson & Co., Evansville, Ind., U.S.A.



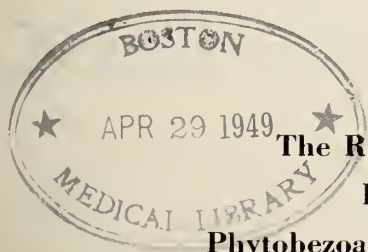
# THE JOURNAL

of the  
MISSOURI STATE MEDICAL ASSOCIATION

VOLUME 46  
NUMBER 5

MAY, 1949

SINGLE COPY, 40 CENTS  
PER YEAR, \$3.00



## ORIGINAL ARTICLES

The Role of a New Analgesic in Surgery

Foreign Body in the Bladder

Phytobezoars, With Gastric Ulcer, Complicated by  
Intestinal Obstruction

Examination of the Male for Sterility

Double Symmetric Monsters

Hoarseness

What Are the Common Types of Cancer?



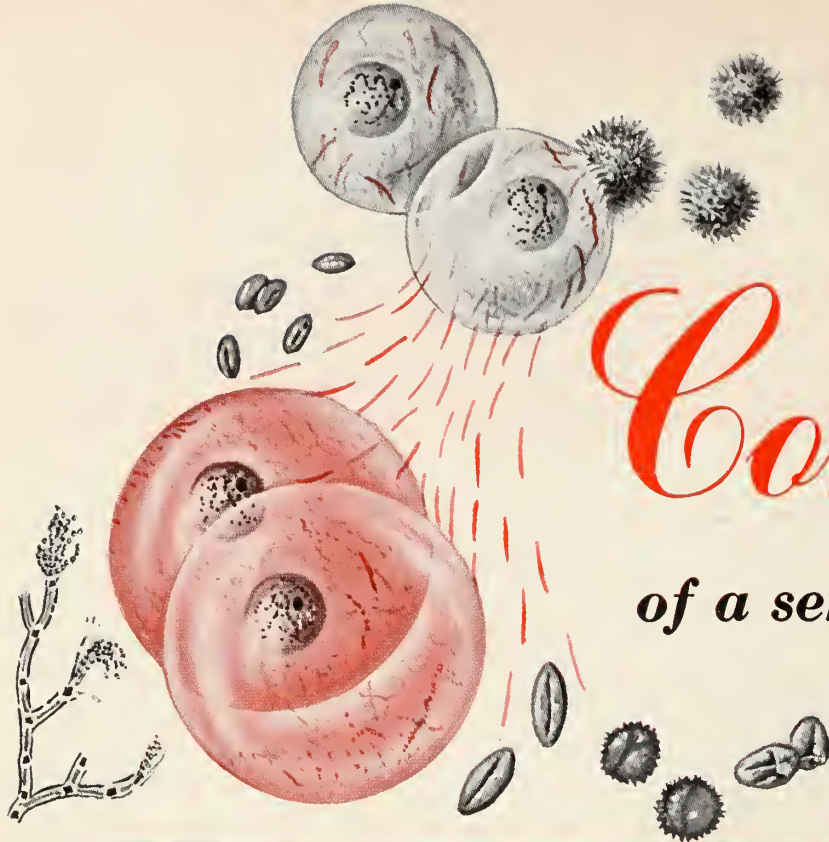
## EDITORIALS

W. A. Bloom, M.D., President-Elect

A. M. A. Session Open to All Members

91st Annual Session

(Contents Index Page 321)



# Contact

*of a sensitized body cell*



# Relief

*with BENADRYL*

PARKE, DAVIS & COMPANY



Contact of a sensitized body cell with an allergen and subsequent release of histamine is considered to be the mechanism of allergic disorders.

Blocking the action of histamine, BENADRYL prevents reaction in cells that have been sensitized. Relief of symptoms is gratifyingly rapid, usually occurring within an hour or two after the first dose. And treatment with BENADRYL is simple, convenient, and inexpensive.

# BENADRYL<sup>®</sup>

BENADRYL has been found highly effective in a wide variety of allergic states, ranging from seasonal, such as hay fever, to the non-seasonal, such as acute and chronic urticaria, angioneurotic edema, vasomotor rhinitis, contact dermatitis, erythema multiforme, pruritic dermatoses, dermographism, serum sickness, food allergy, and sensitization to drugs, such as penicillin and the sulfonamides.

BENADRYL hydrochloride (diphenhydramine hydrochloride, Parke-Davis) is available in a variety of forms to facilitate individualized dosage and flexibility of administration, including Kapseals<sup>®</sup>, Capsules and a palatable Elixir.

The usual dosage of BENADRYL is 25 to 50 mg. repeated as required. Children up to 12 years of age may be given 1 to 2 teaspoonsful of Elixir Benadryl.

DETROIT 32, MICHIGAN



# *Announcement*

## **NATIONAL POSTURE WEEK**

***will be observed this year***

**OCTOBER 17 — 22**

We make this announcement so early in the year because many hundreds of physicians, surgeons, industrial physicians, health officers and other members of the profession have over the last ten years scheduled the event for May.

The change to October has been made in deference to requests from schools, colleges, adult education groups and community welfare organizations like the "Y's." They now look forward to wider and more effective participation because they can key the event into their health education and physical fitness programs early in the school term, thus avoiding vacation season interruptions.

As National Posture Week enters upon its second decade, it is our privilege to thank the many, many physicians who have given it their approval as a worthy contribution to public health education. We pledge ourselves to carry on in the future as we have in the last ten years with National Posture Week and the daily work of The Samuel Higby Camp Institute for Better Posture. We shall do this to the limit of our resources in accordance with the ethical precepts of the profession.

**S. H. CAMP and COMPANY • JACKSON, MICHIGAN**

World's Largest Manufacturers of Scientific Supports

Offices in New York • Chicago • Windsor, Ontario • London, England

***Note:** Physicians may at any time ask for good posture booklets for distribution to their patients and for posters suitable for office and instruction display. All are authentic. Details and descriptions on request to—*

**THE SAMUEL HIGBY CAMP INSTITUTE FOR BETTER POSTURE**

Empire State Building, New York 1, N. Y. (Founded by S. H. Camp & Company, Jackson, Mich.)



# CONTENTS

The Role of a New Analgesic in Surgery. Cyril Costello, M.D., and James McDonald, M.D., St. Louis, Mo. ....	334	President's Page .....	358
Foreign Body in the Bladder. Berneil W. Andrews, M.D., St. Louis, and Max Goldman, M.D., Kansas City, Mo. ....	338	Editorials—	
Phytobezoars With Gastric Ulcer, Complicated by Intestinal Obstruction. Paul A. Knepper, M.D., and Robert B. Bristow, M.D., St. Joseph, Mo. ....	339	W. A. Bloom, M.D., President-Elect .....	359
Examination of the Male for Sterility. William F. Melick, M.D., St. Louis, Mo. ....	344	A. M. A. Session Open to All Members.....	359
Double Symmetric Monsters. Julian A. Ossman, M.D., and Horace M. Wiley, M.D., Jefferson City, Mo. ....	348	Ninety-First Annual Session .....	360
Hoarseness. G. O'Neil Proud, M.D., St. Louis, Mo. ....	354	News Notes .....	360
What Are the Common Types of Cancer? E. Lawrence Keyes, M.D., St. Louis, Mo. ....	356	Musings of the Field Secretary .....	362
		Deaths .....	362
		Organization Activities .....	362
		Miscellany .....	363
		Society Proceedings .....	369
		Book Reviews .....	372
		Commercial Announcements .....	386

Entered as Second-Class Matter, February 18, 1925, at the Post Office at Fulton, Mo., under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1003, Act of October 3, 1917, authorized July 30, 1918. Business Office, 1201-5 Bluff St., Fulton, Mo., and 623 Missouri Building, St. Louis, Mo., Editorial Office, 623 Missouri Building, St. Louis, Mo. Return postage guaranteed. Printed by The Ovid Bell Press, Inc., Fulton, Mo.

## THE MAJOR CLINIC ASSOCIATION

3100 Euclid Avenue, Kansas City, Missouri

A Well  
Equipped  
Institution  
for the  
Treatment of  
Nervous and  
Mental  
Diseases and  
Alcohol  
Drug and  
Tobacco  
Addictions



Beautiful  
Location  
Large, Well  
Shaded  
Grounds,  
Spacious  
Porches,  
All Modern  
Methods for  
Restoring  
Patients to a  
Normal  
Condition

HERMON S. MAJOR, M.D.  
Medical Director

HERMON S. MAJOR, JR.  
Business Manager

## AMERICAN MEDICAL ASSOCIATION

President, Roscoe L. Sensenich, South Bend, Ind.  
President-Elect, Ernest Edward Irons, Chicago.

Annual Session, Atlantic City, June 6-10, 1949

## MISSOURI STATE MEDICAL ASSOCIATION

92nd Annual Session, St. Louis, March 26-29, 1950

President, Wallis Smith, Springfield.  
President-Elect, W. A. Bloom, Fayette.  
Vice Presidents, J. C. Creech, Troy; E. J. McIntire, Carthage;  
H. M. Henrikson, Poplar Bluff.  
Speaker, F. T. H'Doubler, Springfield; Vice Speaker, Victor E. Scherman, St. Louis.  
Treasurer, C. E. Hyndman, St. Louis.  
Secretary, H. E. Petersen, St. Joseph.  
Editor, R. O. Muether, St. Louis.  
Secretary-Editor Emeritus, R. L. Thompson, St. Louis.  
Field Secretary, Raymond McIntyre, St. Louis.  
Assistant Editor-Business Manager, Helen Penn, St. Louis.  
Executive Secretary, Tom R. O'Brien, 623 Missouri Bldg., St. Louis.

### Delegates to the American Medical Association

R. E. Schlueter, St. Louis, 1949-51; alternate, F. G. Pernoud, St. Louis. James R. McVay, Kansas City, 1949-1951; alternate, R. B. Wray, Nevada. W. L. Allee, Eldon, 1948-50; alternate, Paul Baldwin, Kennett. Howard B. Goodrich, Hannibal, 1948-1950.

### Standing Committees

**Scientific Work**—A. N. Arneson, St. Louis, Chairman (1951); Victor B. Buhler, Kansas City (1952); H. E. Petersen, St. Joseph.

**Postgraduate Course**—M. Pinson Neal, Columbia, Chairman (1952); Carl R. Ferris, Kansas City (1952); Raymond O. Muether, St. Louis (1951); Edward Massie, St. Louis (1951); Guy D. Callaway, Springfield (1950). **Associate Members**—W. W. Tillman, Bolivar; Kenneth Glover, Mount Vernon; Paul O. Hageman, St. Louis; D. L. Sexton, St. Louis.

**Publication**—R. O. Muether, St. Louis, Chairman; V. T. Williams, Kansas City; H. E. Petersen, St. Joseph; Fred R. Farthing, Springfield.

**Public Policy and Public Relations**—Armand D. Fries, St. Louis, Chairman (1952); J. W. Allee, Columbia (1950); F. R. Crouch, Farmington (1951); Howard B. Goodrich, Hannibal (1951); John Growdon, Kansas City (1950). **Associate Member**—Cyril W. Schumacher, St. Louis.

**Defense**—Charles E. Hyndman, St. Louis, Chairman (1951); Roland S. Kieffer, St. Louis (1950); L. F. Heimbürger, Springfield (1950); O. B. Zeinert, St. Louis (1952); L. P. Forgrave (1952).

**Medical Education and Hospitals**—John S. Knight, Kansas City, Chairman (1951); F. T. H'Doubler, Springfield (1950); O. J. Gibson, Cape Girardeau (1952); D. M. Dowell, Chillicothe (1950); Oliver Abel, St. Louis (1952).

**Cancer**—E. C. Ernst, St. Louis, Chairman (1950); E. Kip Robinson, Kansas City (1951); Everett Sugarbaker, Jefferson City (1951); William E. Leighton, St. Louis (1952); Marvin Napper, Springfield (1952).

**Medical Economics**—Carl F. Vohs, St. Louis, Chairman (1950); Morris S. Harless, Kansas City (1951); C. T. Herbert, Cape Girardeau (1951); G. A. Aiken, Marshall (1952); A. P. Rowlette, Moberly (1952).

**Mental Health**—E. F. Hoctor, Farmington, Chairman (1951); Paul Hines, St. Louis (1950); Orr Mullinax, Jefferson City (1950); B. Landis Elliott, Kansas City (1952); Frank M. Grogan, St. Louis (1952).

**Maternal Welfare**—E. Lee Dorsett, St. Louis, Chairman (1952); Leo Hartnett, St. Louis (1952); J. L. Johnston, Springfield (1951); E. E. Wadlow, St. Joseph (1950); J. Milton Singleton, Kansas City (1950).

**Infant Care**—G. V. Herrman, Kansas City, Chairman (1951); Eugene Schwartz, Springfield (1951); H. E. Petersen, St. Joseph (1950); Peter G. Danis, St. Louis (1952); Park J. White, St. Louis (1952). **Associate Members**—Joseph C. Jaudon, St. Louis; Daniel B. Landau, Hannibal.

**Health and Public Instruction (McAlester Foundation)**—A. W. McAlester, III, Kansas City, Chairman (1950); M. K. Underwood, Rolla (1951); B. E. DeTar, Joplin (1951); Joseph Conrad, Chillicothe (1950); J. Earl Smith, St. Louis (1952).

**Constitution and By-Laws**—B. Landis Elliott, Kansas City, Chairman (1950); J. H. Summers, Lebanon (1951); John J. Hammond, St. Louis (1950); W. Logan Allee, Eldon (1952); H. O. Loyd, Jefferson City (1952).

Year indicates expiration of term.

**Fractures**—Daniel L. Yancey, Springfield, Chairman (1952); W. J. Stewart, Columbia (1951); N. S. Pickard, Kansas City (1951); W. R. Bohne, St. Louis (1950); J. Albert Key, St. Louis (1950). **Associate Members**—Jacob Kulowski, St. Joseph; B. L. Murphy, Hannibal.

**Conservation of Eyesight**—C. Souter Smith, Springfield, Chairman (1952); Robert Mattis, St. Louis (1951); A. N. Le-moine, Kansas City (1950); C. P. Dyer, St. Louis (1950); Robert S. Minton, St. Joseph (1952). **Associate Members**—Winfred L. Post, Joplin; Philip Luedde, St. Louis; John McLeod, Kansas City; G. J. Tygett, Cape Girardeau; S. L. Freeman, Kirksville; H. B. Stauffer, Jefferson City; E. D. Tenaglia, St. Louis.

**Control of Venereal Disease**—A. W. Neilson, St. Louis, Chairman (1952); W. S. Sewell, Springfield (1951); Charles Greenberg, St. Joseph (1950); Hugh L. Dwyer, Kansas City (1950); E. M. Cannon, St. Louis (1952).

**Industrial Health**—V. T. Williams, Kansas City, Chairman (1951); Horace F. Flanders, Kansas City (1951); E. M. Fessenden, St. Louis (1950); A. M. Ziegler, Kansas City (1952); R. A. Sutter, St. Louis (1952). **Associate Members**—R. Emmet Kelly, St. Louis; H. M. Roebber, Bonne Terre.

### Special Committees

**Physical Medicine**—F. Garrett Pipkin, Kansas City, Chairman (1951); Emmett Settle, Rock Port (1950); Luke A. Knese, St. Louis (1950); A. J. Kotkis, St. Louis (1952); J. L. Washburn, Versailles (1952).

**Tuberculosis**—E. E. Glenn, Springfield, Chairman; Lawrence E. Wood, Kansas City; J. L. Mudd, St. Louis; Paul Murphy, St. Louis; C. A. Brashear, Mount Vernon; W. P. McDonald, St. Joseph; I. J. Flance, St. Louis; Florence E. MacInnis, Kansas City.

**Study of Cardiac Diseases**—A. Graham Asher, Kansas City, Chairman (1952); Drew Luten, St. Louis (1951); A. M. Estes, Jackson (1951); Julius Jensen, St. Louis (1950); Glenn W. Hendren, Liberty (1952). **Associate Members**—Horace W. Carle, St. Joseph; J. W. Fleming, Moberly; C. B. Davis, Nevada; Arthur Strauss, St. Louis; William I. Park, Springfield.

**Rural Medical Service**—R. W. Kennedy, Marshall, Chairman; A. E. Spelman, Smithville; J. W. Well, Palmyra; Martin M. Hart, Salem; R. B. Wray, Nevada.

## COUNCILOR DISTRICTS AND COUNTIES IN EACH DISTRICT\*

J. W. THOMPSON, St. Louis, Chairman

E. C. BOHRER, West Plains, Vice Chairman

**First District:** Councilor, Donald M. Dowell, Chillicothe. Counties: Andrew, Atchison, Buchanan, Caldwell, Carroll, Clay, Clinton, Daviess, De Kalb, Gentry, Grundy, Harrison, Holt, Livingston, Mercer, Nodaway, Platte, Ray, Worth.

**Second District:** Councilor, W. F. Francka, Hannibal. Counties: Adair, Chariton, Clark, Knox, Lewis, Linn, Macon, Marion, Monroe, Pike, Putnam, Ralls, Randolph, Schuyler, Scotland, Shelby, Sullivan.

**Third District:** Councilor, J. William Thompson, St. Louis: St. Louis City.

**Fourth District:** Councilor, Otto W. Koch, Clayton. Counties: Franklin, Jefferson, Lincoln, St. Charles, St. Louis County, Warren.

**Fifth District:** Councilor, J. F. Jolley, Mexico. Counties: Audrain, Boone, Callaway, Camden, Cole, Cooper, Gasconade, Howard, Maries, Miller, Moniteau, Montgomery, Morgan, Osage.

**Sixth District:** Councilor, R. W. Kennedy, Marshall. Counties: Bates, Benton, Cass, Cedar, Henry, Johnson, Lafayette, Pettis, St. Clair, Saline, Vernon.

**Seventh District:** Councilor, Edgar C. Virden, Kansas City. County: Jackson.

**Eighth District:** Councilor, W. S. Sewell, Springfield. Counties: Barry, Barton, Christian, Dade, Dallas, Greene, Hickory, Jasper, Lawrence, McDonald, Newton, Polk, Stone, Taney, Webster.

**Ninth District:** Councilor, E. Claude Bohrer, West Plains. Counties: Carter, Crawford, Dent, Douglas, Howell, Laclede, Oregon, Ozark, Phelps, Pulaski, Ripley, Shannon, Texas, Wright.

**Tenth District:** Councilor, Frank W. Hall, Cape Girardeau. Counties: Bollinger, Butler, Cape Girardeau, Dunklin, Iron, Madison, Mississippi, New Madrid, Pemiscott, Perry, Reynolds, St. Francois, Ste. Genevieve, Scott, Stoddard, Washington, Wayne.

Counties in italics are not organized.





*Particularly in obstetrics, the power of DEMEROL hydrochloride to allay pain, usually, without depressing respiration or endangering mother or child, is of the highest order of significance. DEMEROL hydrochloride is a specific for pain.*

Average adult dose:  
100 mg.

Ampuls of 2 cc.  
(100 mg.); vials of  
30 cc. (50 mg./cc.);  
tablets of 50 mg.  
and 100 mg.

Winthrop-Stearns Inc.  
New York 13, N. Y.  
Windsor, Ont.



# DEMEROL®

## HYDROCHLORIDE

WARNING: May be habit forming.  
Narcotic blank required.

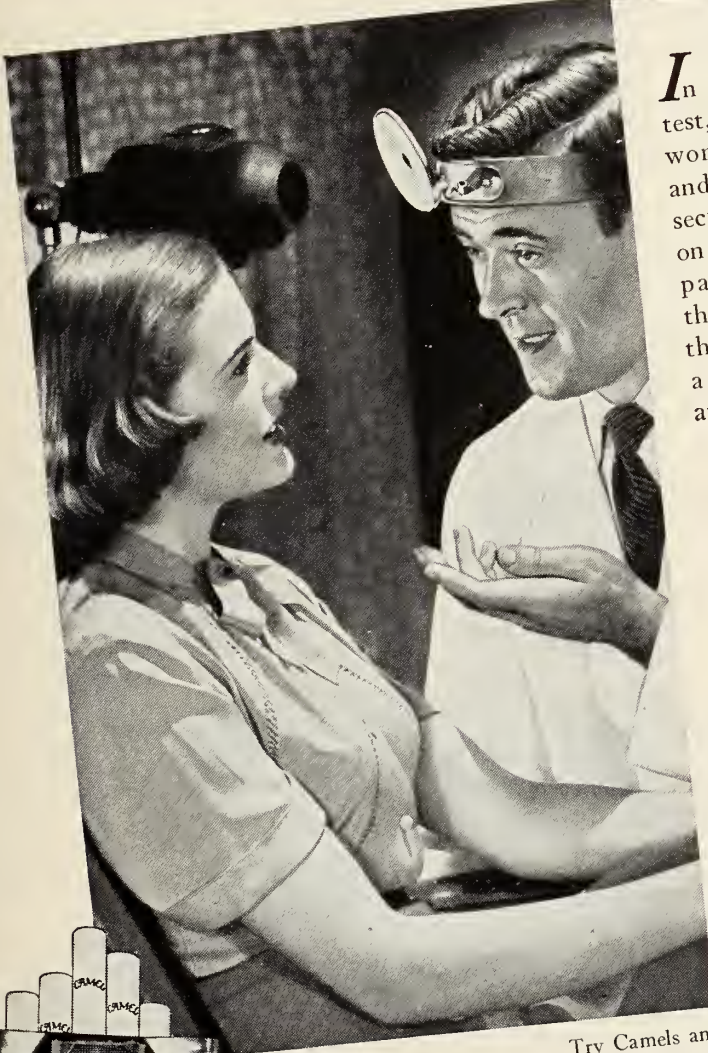
Demerol, trademark reg. U. S. & Canada, brand of meperidine (isonipecaine) hydrochloride.

# County Societies in Affiliation with the Missouri State Medical Association

COUNTY	DISTRICT	PRESIDENT	ADDRESS	SECRETARY	ADDRESS
Andrew	1	V. R. Wilson	Rosendale	M. L. Holliday	Fillmore
Audrain	5	Glen P. Kallenbach	Mexico	Fred Griffin	Mexico
Barton-Dade	8	Rudolf Knapp	Golden City	Vern T. Bickel	Lamar
Bates	6			John M. Cooper	Butler
Benton	6	T. S. Reser	Cole Camp	James A. Logan	Warsaw
Boone	5	James Baker	Columbia	Helen Yeager	Columbia
Buchanan	1	O. Earl Whitsell	St. Joseph	Joseph L. Fisher	St. Joseph
Butler	10	Frank E. Dinelli	Poplar Bluff	J. W. McPheeters, Jr.	Poplar Bluff
Caldwell-Livingston	1	Virgil D. Vandiver	Chillicothe	Charles M. Grace	Chillicothe
Callaway	5	R. B. Price	Fulton	R. N. Crews	Fulton
Camden	5	E. G. Claiborne	Camdenton	G. T. Myers	Macks Creek
Cape Girardeau	10	W. F. Oehler	Cape Girardeau	Charles F. Wilson	Cape Girardeau
Carroll	1	W. G. Atwood	Carrollton	John H. Platz	Carrollton
Carter-Shannon	9			W. T. Eudy	Eminence
Cass	6	Herbert A. Tracy	Belton	O. B. Barger	Harrisonville
Chariton-Macon-Monroe-Randolph	2	D. E. Eggleston	Macon	Henry K. Baker	Moberly
Clay	1	W. H. Goodson	Liberty	S. R. McCracken	Excelsior Springs
Clinton	1	Ronald E. Wilbur	Cameron	F. A. Santner	Lathrop
Cole	5	H. M. Wiley	Jefferson City	J. Paul Leslie	Jefferson City
Cooper	5			J. C. Tinch	Boonville
Dallas-Hickory-Polk	8	C. H. Barnett	Bolivar	John R. O'Brien	Bolivar
De Kalb	1			W. S. Gale	Osborn
Dunklin	10	Quinton Tarver	Kennett	E. L. Spence	Kennett
Franklin	4	Herbert H. Schmidt	Marthasville	F. G. Mays	Washington
Greene	8	Daniel L. Yancey	Springfield	Kenneth E. Knabb	Springfield
Grundy-Daviess	1	Joseph M. Quisito	Trenton	E. A. Duffy	Trenton
Harrison	1	Merriam Gearhart	Bethany	W. A. Broyles	Bethany
Henry	6	S. B. Hughes	Clinton	R. S. Hollingsworth	Clinton
Holt	1	F. E. Hogan	Mound City	D. C. Perry	Mound City
Howard	5	Morris Leech	Fayette	Francis D. Dean	Fayette
Jackson	7	A. N. Altringer	Kansas City	Kenneth E. Cox	Kansas City
Jasper	8	Otto T. Blanke	Joplin	E. H. Hamilton	Joplin
Jefferson	4	Robert H. Donnell	Crystal City	George Hopson	DeSoto
Johnson	6	O. H. Damron	Warrensburg	Reed T. Maxson	Warrensburg
Laclede	9	H. W. Carrington	Lebanon	B. B. Hurst	Lebanon
Lafayette	6	Douglas Kelling	Waverly	Jordan Kelling	Waverly
Lewis-Clark-Scotland	2	J. R. Bridges	Kahoka	P. W. Jennings	Canton
Lincoln	4	H. S. Harris	Troy	J. C. Creech	Troy
Linn	2	Roy R. Haley	Brookfield	J. R. Dixon	Brookfield
Marion-Ralls	2	H. L. Greene	Hannibal	M. J. Roller	Hannibal
Mercer	1	T. S. Duff	Cainsville	J. M. Perry	Princeton
Miller	5	G. D. Walker	Eldon	Carl T. Buehler, Jr.	Eldon
Mississippi	10	G. W. Whitaker	East Prairie	E. C. Rolwing	Charleston
Moniteau	5	K. S. Latham	California	L. L. Latham	California
Montgomery	5	E. J. T. Anderson	Montgomery City	S. J. Byland	Wellsville
Morgan	5	A. J. Gunn	Versailles	J. L. Washburn	Versailles
New Madrid	10	L. J. Smith	New Madrid	H. W. Carter	Portageville
Newton	8	H. C. Lentz	Neosho	J. A. Guthrie	Neosho
Nodaway-Atchison-Gentry-Worth	1	Emmett B. Settle	Rock Port	Charles D. Humbert	Barnard
North Central Counties Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam)	2	Spencer L. Freeman	Kirksville	John B. Jones	Kirksville
Ozarks Medical Society (Barry-Lawrence-Stone-Christian-Taney)	8	Fred Wommack	Crane	Kenneth Glover	Mt. Vernon
Pemiscot	10	E. L. Taylor	Steele	C. F. Cain	Caruthersville
Perry	10	J. J. Bredall	Perryville	L. W. Feltz	Perryville
Pettis	6	E. L. Rhodes	Sedalia	Carl D. Siegel	Sedalia
Phelps-Crawford-Dent-Pulaski	9	A. A. Drake	Rolla	M. K. Underwood	Rolla
Pike	2	Eugene Barrymore	Bowling Green	Charles H. Lewellen	Louisiana
Platte	1	L. C. Calvert	Weston	E. K. Langford	Platte City
Ray	1	L. D. Greene	Richmond		
St. Charles	4	J. M. Jenkins	St. Charles	Calvin Clay	St. Charles
St. Francois-Iron-Madison-Washington-Reynolds	10	George L. Watkins	Farmington	Marvin T. Haw, Jr.	Bonne Terre
Ste. Genevieve	10	A. E. Sexauer	Ste. Genevieve	R. W. Lanning	Ste. Genevieve
St. Louis City	3	J. W. Thompson	St. Louis	S. J. Merenda	St. Louis
St. Louis	4	Paul R. Whitener	St. Louis	Robert C. Kingsland	St. Louis
Saline	6	James A. Reid	Marshall	Charles A. Veatch	Marshall
Scott	10	W. C. Critchlow	Sikeston	W. J. Ferguson	Sikeston
Shelby	2	D. L. Harlan	Clarence		
South Central Counties Medical Societies (Howell-Oregon-Texas-Wright-Douglas)	9	Garrett S. Hogg, Jr.	Cabool	A. C. Ames	Mountain Grove
Stoddard	10	H. A. Harris	Bloomfield	W. C. Dieckman	Dexter
Vernon-Cedar	6	William H. Allen	Nevada	Rolla B. Wray	Nevada
Webster	8	C. R. Macdonnell	Marshfield	E. G. Beers	Seymour



# Here's what throat specialists reported about Camel Mildness—



**I**n a recent coast-to-coast test, hundreds of men and women smoked Camels—and only Camels—for 30 consecutive days. They smoked on the average of one to two packs a day. Each week throat specialists examined the throats of these smokers, a total of 2470 careful examinations, and reported

**“NOT ONE  
SINGLE CASE  
OF THROAT  
IRRITATION  
due to smoking  
CAMELS”**

*Money-Back  
Guarantee!*

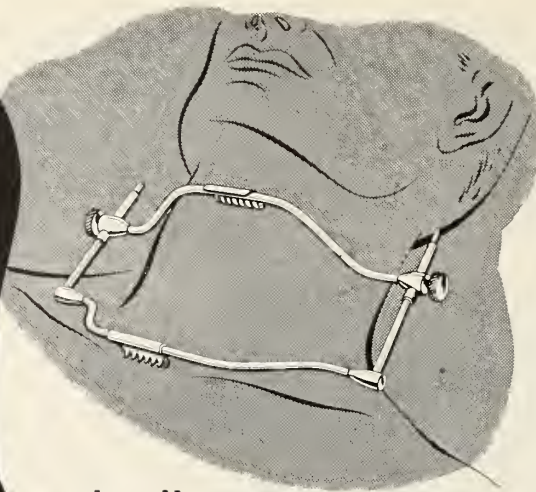
Try Camels and test them as you smoke them. If, at any time, you are not convinced that Camels are the mildest cigarette you've ever smoked, return the package with the unused Camels and we will refund its full purchase price, plus postage. (Signed) R. J. Reynolds Tobacco Company, Winston-Salem, North Carolina.



*According to a Nationwide survey:*

**MORE DOCTORS SMOKE CAMELS**  
*than any other cigarette*

Doctors smoke for pleasure, too! And when three leading independent research organizations asked 113,597 doctors what cigarette they smoked, the brand named most was Camel!

**new!****Mahorner  
thyroid  
retractor**

**no handles  
recessed for unobtrusive use**

No. A2S253. Mahorner Thyroid Retractor,  
stainless steel, each.....\$39.50

\*See New Orleans Med & Surg Jnl, pages 10, 11, vol 101, No 1, July, '48

**a. s. aloe company**

1831 Olive Street • St. Louis 3, Missouri

The Mahorner Thyroid Retractor makes for ease and efficiency in use. Designed so that the main portion of the instrument is recessed into the lateral spaces around the neck, the Mahorner holds the open skin and subcutaneous tissues securely.\* It has no handles to slip or impede an assistant. For easy, controlled adjustment an ingenious sustaining rod slides on a track and is locked by 2 thumb screws.

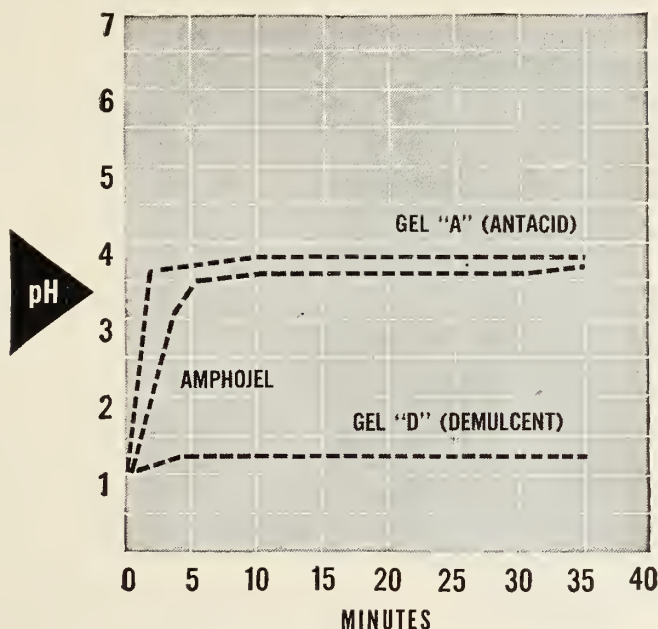


## THE WALLACE SANITARIUM

MEMPHIS, TENNESSEE

*For the Diagnosis and Treatment of  
Nervous and Mental Diseases, Drug Addiction and Alcoholism*





The reaction rate of Amphojel and its component gels.

## the double action of AMPHOJEL®

*antacid  
demulcent*

Amphojel — Aluminum Hydroxide Gel, Alumina Gel Wyeth — is unique because it is a colloidal mixture of two essentially different types of alumina gel, one having an antacid effect . . . the other a demulcent action.

The "antacid gel" instantly stops gastric corrosion and establishes a mildly acid environment.

The "demulcent gel" provides a prolonged local protective effect, and might be likened to a "mineral mucin."



Thus, through its double action, Amphojel gives you an ideal preparation for use in the management of peptic ulcer.



WYETH INCORPORATED, PHILADELPHIA 3, PA.

# Specific Hyposensitization in Pollinosis

**PRESEASONAL  
TREATMENT**  
**75 to 85%** successful  
*in securing comfort and relief*

Order your choice of Arlington's  
Pollen Diagnostic and Treatment  
Sets now . . . and have ample time to  
complete your treatment schedules.

*Arlington*

**THE ARLINGTON CHEMICAL COMPANY**  
YONKERS 1, NEW YORK

## DIAGNOSTIC AND TREATMENT SETS

### State Pollen Diagnostic Sets (\$7.50)

Dry pollen allergens selected according to state; 1 vial house-dust allergen. Material for 30 tests in each vial.

### Stock Treatment Sets (\$7.50)

Each consisting of a series of dilutions of pollen extracts for hypsensitization, with accompanying dosage schedule. Single pollens or a choice of 21 different mixtures. Five 3-cc. vials in each set—1:10,000, 1:5,000, 1:1,000, 1:500, and 1:100 concentrations.

### Special Mixture Treatment Sets (\$10.00)

Mixtures of pollen extracts specially prepared according to the patient's individual sensitivities. Ten days' processing time required.

Arlington offers a full line of potent, carefully prepared, and properly preserved allergenic extracts for diagnosis and treatment—pollens, foods, epidermols, fungi, and incidentals.

*Literature to physicians on request.*



## North Shore Health Resort

Winnetka, Illinois

*on the Shores of  
Lake Michigan*

A completely equipped sanitarium for the care of  
*nervous and mental disorders, alcoholism and drug addiction*  
offering all forms of treatment, including electric shock.

**SAMUEL LIEBMAN, M.S., M.D.**

225 Sheridan Road

*Medical Director*

Phone Winnetka 211



# THIS SUGGESTION MAY BE OF VALUE FOR YOUR THROAT PATIENTS:

When cigarette smoking is a factor in throat irritation,  
many leading nose and throat specialists suggest\*  
to their patients a choice of 3 alternatives:

1. Stop Smoking,
2. Smoke less,
3. Change to Philip Morris!

- Philip Morris is the *only* cigarette proved definitely and measurably less irritating!\*\* Perhaps you too will find it worth while to suggest "Change to PHILIP MORRIS." . . . by far the wisest choice for everyone who smokes.



## PHILIP MORRIS

Philip Morris & Co., Ltd., Inc.

119 Fifth Avenue, N. Y.

**DO YOU SMOKE A PIPE?** We suggest an unusually fine blend — COUNTRY DOCTOR PIPE MIXTURE. Made by the same process as used in the manufacture of Philip Morris Cigarettes.

\*Completely documented evidence on file.

\*\*May we send you copies of these published studies:

Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154; Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60;  
Proc. Soc. Exp. Biol. and Med., 1934, 32-241; N. Y. State Journ. Med., Vol. 35, 6-1-25, No. 11, 590-592.

# 50 and 2

## YEARS TREATING ALCOHOL AND DRUG ADDICTION

In 1897 Doctor B. B. Ralph developed methods of treating alcohol and narcotic addiction that, by the standards of the time, were conspicuous for success.

Twenty-five years ago experience had bettered the methods. Today with the advantages of collateral medicine, treatment is markedly further improved.

The Ralph Sanitarium provides personalized care in a quiet, homelike atmosphere. Dietetics, hydrotherapy and massage speed physical and emotional re-education. Co-operation with referring physicians. Write or phone.

*The*  
**RALPH**  
**SANITARIUM**

*Established 1897*

Ralph Emerson Duncan, M.D.  
DIRECTOR



**529 HIGHLAND AVENUE • KANSAS CITY 6, MISSOURI**

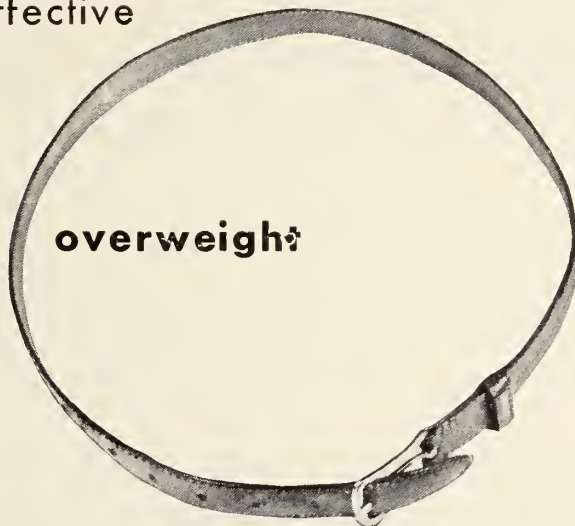
Telephone Vltor 3624



safe...rational...effective

in the treatment of

**overweight**



Harris, Ivy and Searle conclusively proved that 'Benzedrine' Sulfate safely depresses the overweight patient's appetite—and when caloric intake is sufficiently lowered, weight reduction is facilitated. After a comprehensive series of functional tests, these same investigators conclude: "No evidence of deleterious effects of the drug (amphetamine sulfate) were observed." (J.A.M.A. 134:1468, 1947).

**Benzedrine\* Sulfate** tablets • elixir

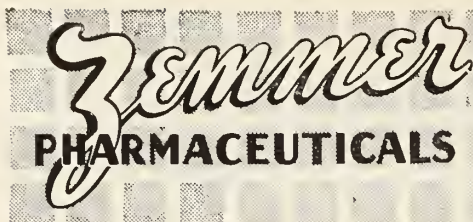
*(racemic amphetamine sulfate, S.K.F.)*

**one of the fundamental drugs in medicine**

*Smith, Kline & French Laboratories, Philadelphia* \*T.M. Reg. U.S. Pat Off.



**ANNOUNCING:** First Television, in Natural Color, of Surgical and Medical Procedures while under way. Arranged and presented by Smith, Kline & French Laboratories—AMA Convention, June 6, 7, 8 & 9, at Atlantic City.



A complete line of laboratory  
controlled ethical pharmaceuticals.  
*Chemists to the Medical Profession for 44 years.*  
Mo. 5-49 *The Zemmer Company*  
Oakland Station • PITTSBURGH 13, PA.

**RADIUM** (including Radium Applicators) FOR ALL MEDICAL PURPOSES  
*Est. 1919*

**QUINCY X-RAY & RADIUM LABORATORIES**

(owned and directed by a Physician-Radiologist)

W. C. U. Bldg.

HAROLD SWANBERG, B.S., M.D., Director

QUINCY, ILLINOIS

**HAMILTON-SCHMIDT SURGICAL COMPANY**

*St. Louis, Missouri*

[[ Surgical Instruments, Invalid and Sick Room Supplies ]]  
Post-Operative Belts, Elastic Hosiery and Trusses Fitted ]]

Central 1680

REGISTERED NURSE IN ATTENDANCE 215 North Tenth Street

*for Fifty Years*

**PROFESSIONAL PROTECTION  
EXCLUSIVELY**

**THE  
MEDICAL PROTECTIVE COMPANY  
FORT WAYNE, INDIANA**

ST. LOUIS Office: A. W. Breckenkamp, Representative, 623 Missouri Theatre Building, Telephone Newstead 0404



# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies  
Issued Monthly under direction of the Publication Committee

COPYRIGHTED, 1949, BY MISSOURI STATE MEDICAL ASSOCIATION. ALL RIGHTS RESERVED.

VOLUME 46

MAY, 1949

NUMBER 5

R. O. MUETHER, M.D., Editor  
HELEN PENN, Assistant Editor  
623 Missouri Bldg., St. Louis, Mo. Telephone, Newstead 0404-05

PUBLICATION COMMITTEE { R. O. MUETHER, M.D., Chairman  
V. T. WILLIAMS, M.D.  
H. E. PETERSEN, M.D.  
FRED R. FARTHING, M.D.

### THE ROLE OF A NEW ANALGESIC IN SURGERY

CYRIL COSTELLO, M.D., *St. Louis*

AND

JAMES McDONALD, M.D., *St. Louis*

SINCE THE isolation of morphine by Frederick Wilhelm Serturmer in 1803, clinicians and chemists have sought for improved analgesics which might relieve physical pain as adequately without producing the numerous deleterious morphine effects. To relieve persistent pain, such as that of advanced cancer, it generally is observed that salicylates and their simpler mixtures do not serve adequately for long. Consequently, the gamut of the more potent opium alkaloids and related compounds is begun. Morphine effect itself has the disadvantages of depression of the central nervous system, nausea, vomiting, constipation, hypnosis and addiction. Demerol, which was synthesized by Eisler and Schumann<sup>8</sup> in 1939, has found some use as a morphine substitute. Battermann and Himmelsbach<sup>1</sup> reported some advantages over morphine consisting of (1) relief of smooth muscle spasm, (2) no respiratory depression and (3) a lesser liability for development of physical dependence.

It has been our studied observation that the debilities which handicap the terminal cancer patient and impose financial, nursing and other burdens on conscientious relatives are oftentimes due more to the hypnotic effect of opiate analgesics than to the disease itself. It was in quest of an analgesic to be administered orally or parenterally which would relieve pain without producing untoward reactions and impairment of body functions that prompted us to study a new synthetic analgesic, Adanon Hydrochloride.\*

From the Departments of Surgery, St. Louis City Hospital, and the Washington University School of Medicine, St. Louis.  
\* Supplied by Winthrop Chemical Company.

#### CHEMISTRY AND PHARMACOLOGY

Adanon Hydrochloride is 6-dimethylamino, 4-diphenyl, 3-heptanone hydrochloride. It is a crystalline powder which is soluble in water and alcohol but insoluble in ether. Its melting point is 236.5 C.

Scott and Chen<sup>3</sup> reported with the smallest dose some properties similar to morphine such as (1) depression of respiration in dogs, (2) vagal slowing of the heart and (3) stimulation of salivary secretion in the unanesthetized dog. Scott demonstrated that it differed from morphine in that it produced less stimulation in cats, showed no tendency to the development of tolerance and had little or no emetic action in dogs.

Wikler and Frank<sup>5</sup> have found, using dogs, that with Adanon the abstinence syndrome appeared to be more rapid in onset, more severe and of shorter duration than that of morphine.

Scott and Chen<sup>3</sup> reported that the smallest dose of Adanon producing a definite rise in the pain threshold in dogs was 1 mgm. per kilogram of body weight. A dose of 5 mg. per kilo of weight resulted in marked analgesia. Weight for weight, Adanon appears to be a more potent analgesic than morphine.

#### CLINICAL STUDY

In humans, trial therapeutic doses have had no effect on temperature, pulse, blood pressure or respiration. Narcosis and sedation usually have not been present with 10 mg. doses but have been produced with larger doses (20 to 30 mg.). Clinical studies have shown no change in the blood cells. Lehman and Aitken<sup>7</sup> found that from 20 to 35 per

Table 1.

	Number of Patients	Average Dose	Average Time of Relief	Satisfactory Relief	Unsatisfac- tory Relief	Per-Cent Benefit
Preoperative and Postoperative Medication .....	46	10 mgm.	4 hrs.	39	7	84.8
Carcinoma .....	32	10 mgm.	4 hrs.	30	2	93.8
Gangrene .....	8	10 mgm.	4 hrs.	8		100.0
Renal Colic .....	4	5 mgm.	4 hrs.	4		100.0
Osteomyelitis .....	1	10 mgm.	6 hrs.	1		100.0
Cellulitis .....	5	10 mgm.	4 hrs.	4	1	80.0
Cholecystitis .....	4	10 mgm.	4 hrs.	4		100.0
Peritonitis .....	3	10 mgm.	4 hrs.	3		100.0
Appendicitis .....	9	10 mgm.	4 hrs.	9		100.0
Fractures .....	5	10 mgm.	4 hrs.	5		100.0
Burns .....	4	10 mgm.	5 hrs.	4		100.0
Abscess—Extremities, Lung, etc. ....	10	10 mgm.	4 hrs.	10		100.0
Stab Wound of Chest .....	5	10 mgm.	5 hrs.	5		100.0
Thrombophlebitis .....	2	10 mgm.	4 hrs.	2		100.0

cent of Adanon was excreted in the urine in a twenty-four hour period.

Isbell, Eisenman, Wikler, Daingerfield and Frank,<sup>9, 10</sup> in a study of tolerance and habituation liability on seventeen former morphine addicts, reported many interesting observations. They found that Adanon did not produce euphoria in persons not addicted to morphine when used for relief of pain although larger doses in addicts did produce a pleasurable reaction comparable to that obtained with morphine and its derivatives. They also noted that Adanon prevented or completely eliminated the morphine abstinence syndrome. After prolonged administration of Adanon, tolerance has developed followed by mild withdrawal symptoms. Therefore Adanon must be considered a potentially addictive drug unless further studies prove otherwise.

Kohlstaedt<sup>2</sup> found in a series of thirty patients that 80 per cent were relieved completely of pain of varied etiology. Scott and coworkers in a series of 210 cases found pain to be relieved in 72.9 per cent and partially relieved in 22.9 per cent. Bieter and Troxil<sup>4</sup> report similar results in a series of eighty-six cases. The untoward reactions found by all of these were minimal and consisted of nausea and vomiting and mild headache.

#### REPORT ON 137 CASES

Experience with the use of Adanon Hydrochloride has consisted in the study of 137 cases at the St. Louis City Hospital on the Washington University surgical service and in the tumor clinic. This study was carried out from April 1947 to August 15, 1947, using Adanon Hydrochloride exclusively on those patients requiring relief of pain. This drug has been used continuously, particularly in the tumor service, until the present time with results similar to these reported here in greater detail. Each patient had a separate sheet in his chart on which were recorded the date, time, dose and means of administration, the purpose, the diagnosis and the results. This chart was kept by the nursing department and supervised and checked by the house staff and ourselves. A small number of these patients were admitted to the urology service.

#### RESULTS

*Preoperative and Postoperative Analgesia.*—From table 1 it will be noted that the greatest

number of cases studied consisted of those requiring preoperative and postoperative analgesia. These cases consisted of amputations, multiple contusions and lacerations, hemorrhoids, gastric ulcer, perforated peptic ulcers, varicose veins and rectal polyps. The preoperative medication for these patients consisted of 10 mg. of Adanon Hydrochloride, gr. 1/150 of atropine sulfate when indicated, and usually nembutal gr. iss. The nembutal was given orally two hours before operation. The Adanon and atropine were given subcutaneously one hour prior to operation. There was no noticeable reduction in blood pressure, pulse or respirations. These patients were in a drowsy, sleepy and carefree mood when they reached the operating room although euphoria was not present as with morphine. No patient was excited or hyperactive and all tolerated operations well.

The postoperative period of these patients varied from two days to months and their analgesia consisted entirely of Adanon Hydrochloride. The most common dose consisted of 10 mg. as needed every four hours. Few patients required a hypodermic every four hours. Some hemorrhoid patients were given 5 mg. every four hours with satisfactory results. The average time of relief consisted of four hours but many of the patients obtained relief for at least seven hours. Many of the patients only required two hypodermics a day, usually at night and early in the morning.

Satisfactory results were obtained in 84.8 per cent of the forty-six cases; only seven cases did not obtain satisfactory results and some of their comments were difficult to evaluate. Those who did not obtain relief of pain had the following diagnoses: (1) severe injury of hand (2) varicose veins with ulcers (3) hemorrhoids (4) cellulitis with lymphedema and (5) post herpetic neuritis.

*Cancer.*—Thirty-two patients with carcinoma were treated with Adanon Hydrochloride and it is in this group of patients that results were most gratifying. One patient with cancer of the prostate with marked generalized metastasis at the age of 44 received a tremendous amount of this drug. His doses at the present time are 25 mg. administered orally every three hours. Although his doses are large he has been spared the stuporous, depressed state of debility that would have ensued with alkaloids. He has had no untoward reaction with this dose except for occasional nausea.



A patient with an extensive carcinoma of the lip requiring neck dissection and partial resection of the mandible subsequently developed painful recurrence of the growth. He received a total of 1,540 mgs. of Adanon Hydrochloride before he expired and during this time he remained active and helpful to the nurses and attendants about the ward; at no time did he experience any untoward reactions, dullness or narcosis. His maximum dose during this period was 15 mg. every four hours.

The average dose again for this group of patients was 10 mg. administered from three to four times daily. Only two patients did not receive satisfactory results, one having an adenocarcinoma of the left breast with metastasis and the other a carcinoma of the right lung with empyema. These two patients did not receive a dose greater than 10 mg. and it is believed that better results would have been obtained with greater doses. The average time of relief with the 10 mg. dose was four hours.

**Gangrene.**—Eight patients had gangrene of an extremity and all obtained satisfying relief of pain. Although this is a small number of cases for study, it gives a good indication that Adanon can be effective in this disease. This group received an average dose of 10 mg. with complete relief for four hours.

**Infections and Fractures.**—It will be noted in table 1 that the cases of cellulitis, cholecystitis, peritonitis, appendicitis, fractures, abscesses and thrombophlebitis all received an average dose of 10 mg. and the average period of relief was four hours. No unsatisfactory results were obtained in this group. Many of these cases were surgical and they all received Adanon Hydrochloride with atropine sulfate and nembital as pre-anesthetic medications. As a group, these patients did not require a great deal of analgesic medications while in the hospital but Adanon was quite effective in hypodermic doses of 10 mg. postoperatively.

**Renal Colic.**—We studied four patients with renal colic, two of whom had a positive diagnosis of renal lithiasis. It was surprising to note that these patients only received an average dose of 5 mg. and obtained an average period of relief of four hours. Other essayists have reported similar results with small numbers of cases of renal colic. This drug was used with atropine sulfate on a few occasions.

**Burns.**—The pain accompanying severe burns is familiar enough to require no description. There were only four severely burned patients during this period. This group had an average of five hours relief from Adanon Hydrochloride with no unsatisfactory results.

**Chest Wounds.**—There were also five cases of stab wounds of the chest which received satisfactory results on doses of 10 mg. All of these patients had penetrating wounds of the chest which required closed drainage. Pleural effusion and blood were removed by thoracentesis on several occasions. They all recovered without any residual complica-

tions and pain was controlled adequately with Adanon.

Of the 137 patients studied, 127 (93 per cent) obtained satisfactory results and ten patients (7 per cent) did not experience relief of pain.

## UNFAVORABLE REACTIONS

Table 2.

Type of Reactions	Degree of Severity	Number of Cases	Per Cent of Reactions
Nausea .....	Mild	16	11.7
Vomiting .....	Moderate	16	11.7
Dizziness .....	Mild	6	4.4
Headaches .....	Mild	1	.7
Decreased Salivation .....	Mild	4	2.9
Skin Rash .....		1	.7
Anorexia .....	Mild	2	1.5
Hallucinations .....		1	.7
Blurring of Vision .....		2	1.5
Dyspnea .....	Mild	1	.7
Cyanosis .....		1	.7
Delusions .....		1	.7
Drowsiness .....		2	1.5
Depression of Respirations ....		2	1.5
Unconsciousness .....		1	.7

The most common reactions to Adanon were nausea and vomiting (table 2). Both nausea and vomiting occurred in thirteen patients whereas two had nausea alone and two had vomiting alone. At no time was the drug completely discontinued for these reactions; on some occasions the medication was discontinued for a day or so and then restarted without the nausea and vomiting developing. One patient with carcinoma of the cervix and extensive metastasis had frequent attacks of nausea and vomiting but was so pleased with the analgesic effect of Adanon Hydrochloride that she refused to take anything else for pain. She continued on the drug until her demise. Every instance of nausea and vomiting was recorded while these patients were on Adanon and therefore in some instances other causes might have been responsible for these reactions.

Dizziness was described as a reaction by six of the patients but at no time was this considered a contraindication to using the drug. One patient described the dizziness as the feeling he gets when he has about "two good drinks of whiskey." This reaction never approached vertigo and did not impede ambulation.

Four patients reported some decreased salivation which was of no critical significance. There were many reactions reported on one record, including skin rash, hallucinations, dyspnea, cyanosis and delusions. It is quite improbable that these reactions were due to Adanon. This patient was a 67 year old female on whom a radical pancreatectomy for carcinoma of the head of the pancreas had been performed. She was receiving several medications at the time the macula-papular rash developed.

Anorexia and drowsiness were observed in two patients but these were of a mild nature; depression of the respiratory rate to 16 per minute was seen in two instances. One of these patients was admitted to the hospital with a large fluctuant abscess of the left mandible and cheek. This patient received 10 mg. of Adanon Hydrochloride at 10:00

p.m. and at 2:30 a.m. He also received  $1\frac{1}{2}$  grains of nembutal at 11:00 p.m. At 4:00 a.m. the patient was completely unconscious with respiration depressed to a rate of about 10 per minute and with some cyanosis. With oxygen and stimulants he regained consciousness at 7:30 a.m. The abscess was drained and he made an uneventful recovery. How

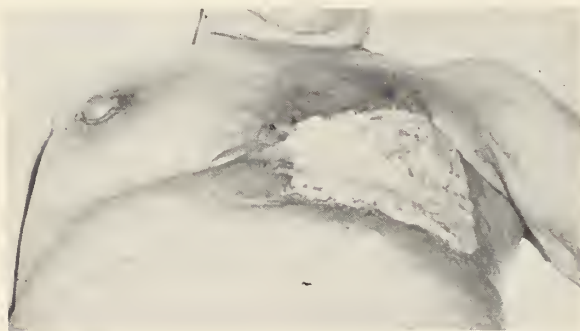


Fig. 1. A 75 year old woman presenting complaint of pain from advanced cancer of the left breast which had extended throughout skin of the chest and back and into the regional lymph nodes and opposite breast. With 10 mg. of Adanon Hydrochloride from three to four times daily her pain was relieved and she remained alert and active enough to care for herself in a home. Her expectancy has been increased by eliminating the debilities of narcosis; and comfort both to herself and to her associates has been enhanced by maintaining physical and mental activity.

much Adanon Hydrochloride had to do with this complication is difficult to determine.

Fifty-three patients of the series of 137 received complete relief of pain for four hours as will be noted in table 3. Thirty-five patients received more than four hours of complete relief. Demerol, morphine and other opium alkaloids compare similarly. The greatest feeling of relief of pain occurred about

Table 3. Time of Relief

	Less than 2 hrs.	2 hrs.	3 hrs.	4 hrs.	5 hrs.	6 hrs.	More than 6 hrs.
No. of Cases	6	9	33	53	21	11	4
Pct. of Cases	4.4	6.5	24.0	38.7	15.3	8.0	2.9

one and one half hours after subcutaneous injection, while with the intravenous injection of 10 mg. relief was complete in from five to ten minutes.

These cases were finally divided according to degree of relief. The results are recorded in table 4. Scott and his coworkers,<sup>2</sup> Kohlstaedt, Kirchhof and David<sup>6</sup> report similar results. The range of dose

Table 4. Amount of Relief

	Excellent	Fair	Poor
Number of Patients	104	25	8
Per Cent of Patients	75.9	18.2	5.9

in this series of cases varied from 2.5 mg. to 25 mg. The most common and by far the most desirable dose was found to be 10 mg. Of course in some patients this was found inadequate and accordingly larger doses were administered. We have had some patients taking Adanon for months and at no time has the dose been greater than 15 mgs.

#### CASE REPORTS

Case 1. A 75 year old white woman was admitted to

the surgical service on March 3, 1947, complaining of pain and discharge from the left breast area. She was found to have an advanced carcinoma of the breast of two years known duration which had been treated elsewhere by palliative simple mastectomy and X-radiation (fig. 1). Radiation skin reaction over the left chest contraindicated further roentgen ray therapy. The eczema and cellulitis were treated by ultra violet radiation and dry gauze applications. Her pain was relieved with 10 mg. doses of Adanon administered orally three or four times daily and she was discharged to an old folks' home where she has since been free of pain by similar daily doses.

The important and significant fact which this woman typifies is that although she has a far advanced cancer which was a source of much pain, she has been relieved of her greatest complaint without invalidizing her by narcosis. She has remained alert, active and interested in the routines of managing for her own necessities at a home. She has not been a nursing problem and she has not been subjected to the dangers of pneumonia or decubiti which accompany the analgesic state obtained by opium drugs.

Case 2. A 16 year old white male was admitted to the surgical service with a 40 per cent burn of the body, face and extremities sustained in a gasoline fire accident (fig. 2). He was taken immediately to the operating room where vaseline gauze pressure dressings were applied. These dressings were changed frequently after the first nine days and finally he was skin grafted.



Fig. 2. A 16 year old patient with a 40 per cent surface burn. During his entire hospital course, pain was relieved completely with Adanon Hydrochloride. In this type of surgical patient the advantages of adequate analgesia without the disadvantages of sedation and narcosis is of utmost importance.

During his entire hospital course his pain was relieved by Adanon alone with excellent results. He received Adanon (10 mg.) intravenously on three occasions and was given 10 mg. before each dressing and otherwise as requested. He had no untoward reaction except nausea and vomiting on one occasion. His pain was completely relieved for from four to five hours following each 10 mg. dose.



Case 3. An 81-year-old white male was admitted to the surgical service on May 9, 1947, complaining of excruciating pain in the left foot and leg resulting from arteriosclerotic gangrene of the toes (fig. 3). In fact, upon admission he was menacing other patients with his loud wails of agony. He was given Adanon 10 mg. for pain relief and within thirty minutes was comfort-

Table 5. Dosages

Average	Maximum	Minimum	Optimum
10 mg.	25 mg.	2.5 mg.	10 mg.

able. During the remainder of his hospital course of four days he was completely devoid of pain by the administration of 10 mg. of Adanon every four hours. Having thus been relieved, he rejected all advice to undergo an amputation procedure and left the hospital.

#### SUMMARY

The desirability of a potent analgesic drug which may be administered simply and which obviates the dangers and disadvantages of opium alkaloids has been demonstrated.

A new synthetic drug, Adanon Hydrochloride, has been studied in its application to relief of pain in surgical patients and patients with inoperable, incurable cancer.

In a series of 137 consecutive surgical patients requiring relief of pain, satisfactory analgesic effect was obtained in 94.1 per cent with the use of Adanon Hydrochloride. The dose most commonly employed was 10 mg. and the average period of relief was four hours.

Results are presented which indicate that while Adanon does not meet all the requisites of the "perfect analgesic," it has many advantages over other such drugs now commonly employed.

Three case reports are presented as examples of



Fig. 3. The gangrenous extremity of an 81 year old male who entered the hospital because of excruciating pain in his foot. Relief with Adanon was complete after thirty minutes and continued so well that he refused any further treatment and left the hospital against advice.

such patients who have been treated beneficially with Adanon.

It must be emphasized that at least with the evidence now at hand this drug should be considered a potentially addictive drug.

3720 Washington Avenue, St. Louis, Missouri

#### BIBLIOGRAPHY

1. Battermann and Himmelsbach: J.A.M.A. 122:222-226, 1943.
2. Scott, C. C.; Kohlstaedt, K. G., and Chen, K. K.: Anesth. & Anal. 26:12, 1947.
3. Scott, C. C., and Chen, K. K.: J. Pharmacol. & Exper. Therap. 87:63, 1946.
4. Bieler, R. N., and Troxil, E.: personal communication.
5. Wikler, A., and Frank, K.: Proc. Soc. Pharmacol. & Exper. Therap. 6:384, 1947.
6. Kirchhof, A. C., and David, N. A.: Proc. Soc. Pharmacol. & Exper. Therap. 6:345, 1947.
7. Lehman, R. A., and Aitken, T.: J. Lab. & Clin. Med. 28: 787, 1943.
8. Eisler, O., and Schaumann, O.: Deutsche med. Wchnschr. 65:967, 1939.
9. Isbell, H.; Eisenman, A. J.; Wiler, A.; Daingerfield, M., and Frank, K.: Proc. Soc. Pharmacol. & Exper. Therap. 6:264, 1947.
10. Isbell, H.; Eisenman, A. J.; Wikler, A.; Daingerfield, M., and Frank, K.: Proc. Soc. Pharmacol. & Exper. Therap. 6:340, 1947.

#### RECOVERY FROM TUBERCULOSIS CREDITED TO STREPTOMYCIN

The dramatic recovery of a 22 year old girl treated with streptomycin for active tuberculosis of the lungs has led a Berkeley, Calif., doctor to question the generally accepted belief that the drug should be reserved for tuberculosis cases that do not respond well to ordinary treatment.

Writing in the April 16 issue of *The Journal of the American Medical Association*, Marshall C. Cheney, M.D., says that the girl's condition has been considered incurable. She was extremely emaciated and also had Addison's disease, a condition caused by disease of the suprarenal glands, located at the upper end of each kidney.

She was treated three months with streptomycin at her home and showed no toxic symptoms even on full dosage of the drug, possibly because she was given large doses of vitamin B, Dr. Cheney suggests.

"It was evident that a cure had been accomplished,"

Dr. Cheney points out. She gained 34 pounds and became active and in good health.

"Reading over the various reports on all types of tuberculosis treated with streptomycin, one notes the extremely cautious conclusions," he comments. "Admitting that all patients do not respond favorably to streptomycin and that some had toxic damage (at least from the old high dosage treatment without protection of the nerve structures by thiamine), the unbelievable improvement in this patient makes it fair to question the generally accepted conclusion of tuberculosis specialists that streptomycin should be reserved for tuberculosis that is not responding well to the old regimen.

"Obviously, this patient could have been saved over a year of sanatorium care and from approaching death had streptomycin been administered at the outset. Should not every case of active tuberculosis have a trial of streptomycin therapy first?"

## FOREIGN BODY IN THE BLADDER

## REPORT OF A CASE

BERNEIL W. ANDREWS, M.D., *St. Joseph*

AND

MAX GOLDMAN, M.D., *Kansas City*

FOREIGN BODIES in the urinary bladder are not uncommon clinical findings. They obtain entrance into the bladder by three methods, according to Eisend-rath and Rolnick: (1) through the urethra, which is the most common mode of entrance and may be intentional or accidental, (2) through wounds made by shell fragments, splinters of bone, puncture wounds, or (3) through the wall of the bladder from the migration of objects which lie outside the bladder wall, e.g., sponges or sequestra of bone as in osteomyelitis. In the case reported the foreign body was self introduced intentionally or accidentally.

The motive for self insertion of foreign bodies through the urethra into the bladder is usually for erotic purposes and less frequently for the purpose of inducing abortion or for impotency. Dakin collected and classified from the literature 203 cases under autoeroticism in his book on "Urological Oddities." Of this collection nine were cases of glass thermometers. Other items mentioned were chewing gum, glass stirring rods, hairpins, safety pins, hat pins, pencils, wax candles, buttons, fishing lines, finger nail files, slippery elm bark, balloons, douche syringe tips, light cords, hypodermic tablet vial, glass catheter, small snake, carrot, night crawler, straws, paper clips and many other objects.

The reaction of the bladder to the presence of the foreign body varies with the object introduced, and the patient may go for years without presenting symptoms. The most common complaints are urgency, tenesmus, hematuria, pyuria and even pain upon movement of body parts. Symptoms frequently do not become manifest until encrustations with urinary salts form a calculus. It often has been pointed out that any foreign body having a rough irregular surface, such as fragments of shells, rubber and hairpins, will become encrusted early, while those with a smooth surface, such as prune pits, glass and paraffin, become encrusted late or not at all.

The symptomatology is due to the development of an acute, subacute, or chronic cystitis, the bacteriology of which will vary greatly. At times cases are seen in which there develops an infection of the upper urinary tract; but as a rule the pathologic condition is limited to the bladder itself whether this involves the mucosa, the bladder wall or all the layers including the serosa outside of the bladder, as in a fistula.

The diagnosis is seldom made on the history. The patient oftentimes will deny any part in the intro-

duction of the foreign body and, in other instances, the history is so vague that the real truth must be deduced by the examining physician, as in the case reported here. Rectal and vaginal palpation is often helpful in diagnosis since foreign bodies in the bladder can be palpated easily in this manner; at the same time involvement of these two cavities can be ruled out. Roentgenograms in the anterior-posterior and lateral views will help make the diagnosis if the object is radiopaque. Cystoscopy, of course, not only reveals the presence of a foreign body but also identifies its type.

Removal of foreign bodies is either through suprapubic cystotomy or by cystoscopic methods, depending on such factors as size and composition of the object, the condition of the patient and the technical difficulties encountered.

## CASE REPORT

A girl, aged 15, white, was admitted to Kansas City General Hospital on December 18, 1947, from the clinic department with the chief complaint of intermittent suprapubic pain, urgency and dysuria of two days duration. The patient stated that she was in the habit of checking her temperature occasionally by inserting a thermometer rectally. On this particular occasion, she claimed that she became somewhat disturbed and as a result failed to place the thermometer properly and suddenly discovered that it had disappeared. She was unable to locate the thermometer either in the rectum or on the floor nearby. Following the disappearance of the thermometer she experienced dysuria and frequency. This continued for two days, at which time she decided to report the incident to her mother who brought her to the hospital for consultation.

Since the patient had been taking her temperature rectally she was sent to the proctology clinic, and the report upon examination was that no foreign body could be found in the rectum. The patient informed the proctologist that she did not expect him to find the object in the region where he made the examination. Acting upon this implication she was sent for roentgenograms, by which means the foreign body was located promptly (fig. 1). She was placed in the hospital on the urologic service.

The patient was large, obese, overly developed and appeared five years older than her chronologic age. She obviously was underdeveloped mentally and gave a history of repeating the first and second grades in school and then dropping out of school entirely at the age of 12.

Temperature was 99, pulse 80, respiration 22, blood pressure 115/80, Hb. 81 per cent, white blood count 9,150, nonprotein nitrogen 28, serologic tests negative; urinalysis showed neutral reaction, specific gravity 1.023, trace of albumin, no sugar, epithelial cells, mucus, bacteria or amorphous sediment, one to three leukocytes and occasional red blood cell.

From the Department of Urology, Kansas City General Hospital, Kansas City.



The patient was given a low spinal anesthetic of 8 mg. pontocaine. The object was plainly visible through the McCarthy resectoscope sheath assembled with the McCarthy visual hemostatic grasping forceps and for-oblique telescope. The mercury tip of the thermometer was closer to the grasping forceps. The problem presented was to grasp the fragile glass instrument with such extreme care as to avoid breaking the delicate mercury tip, the portion of the thermometer appearing more desirable for engagement, thus making its extraction mechanically less difficult. By gentle maneuvering, the tip of the thermometer was lined up with the lumen of the shaft into which it was directed easily for a short distance after which, with the bladder fully distended, the thermometer, forceps and sheath were withdrawn simultaneously from the urethra.

The patient remained in the hospital overnight and was released the next morning asymptomatic.

#### DISCUSSION

As illustrated by this case, it is important to emphasize that frequently mental or psychic abnormalities are associated with the self introduction of various and sundry objects into the bladder and that a false and misleading history frequently is obtained.

The method of removing the foreign object should be selected according to its suitability with reference to the safety and ease of extraction. If the procedure reported had presented any difficult complication or hazard, the removal could have

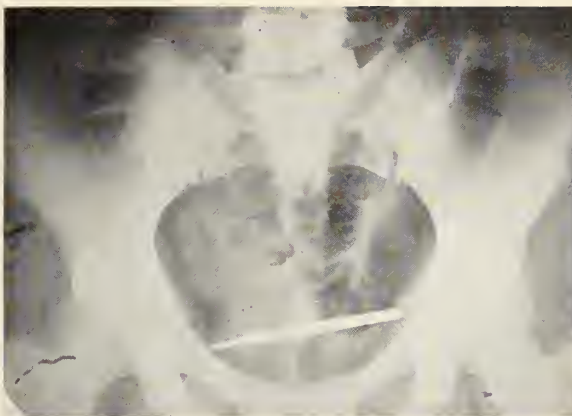


Fig. 1. Position of the thermometer in the bladder.

been accomplished simply by placing the patient in the knee chest position and grasping the foreign body with alligator forceps through the Kelly endoscope, or, if necessary, suprapubically.

Thompson, Brumm & Knepper Clinic.  
1618 Professional Bldg.

#### BIBLIOGRAPHY

- Dakin, W. B.: *Urological Oddities*, Los Angeles, 1948.  
Eisendrath, D. N., and Rolnick, Harry C.: *Urology*, J. B. Lippincott Co., 1948.  
Everett, Houston S.: *Gynecological and Obstetrical Urology*, 2nd ed., The Williams & Wilkins Co., 1947.  
Lowsley, O. S., and Kirwin, T. J.: *Clinical Urology*, The Williams & Wilkins Co., 1944.

## PHYTOBEZOARS, WITH GASTRIC ULCER, COMPLICATED BY INTESTINAL OBSTRUCTION

PAUL A. KNEPPER, M.D., *St. Joseph*

AND

ROBERT B. BRISTOW, M.D., *St. Joseph*

THE PURPOSE OF this paper is to discuss the association of bezoars with gastric ulceration; also, to present a case history of phytobezoars associated with gastric ulcer, complicated by intestinal obstruction.

#### DEFINITION AND HISTORY

The word "bezoar" probably is derived from the Arabian "badzehr" or the Persian "pad zahr," which denotes counter-poison or antidote. The ancients, as early as the Twelfth Century, B.C., ascribed great healing powers to the bezoar stone.

Two types of the ancient bezoars have been described in the literature,<sup>4</sup> the first being the oriental bezoar stone and the other the occidental bezoar stone. DeChambre says that the oriental bezoar stone was the more precious. The oriental bezoar was found chiefly in the fourth stomach and the intestines of the bezoar goat of the Persian variety, and of the gazelle, consisting particularly of cholestrin, bile pigments and bile salts. This combustible bezoar dispersed an aromatic odor.

The occidental bezoar, on the other hand, a prod-

uct of South America, was specifically from the Vicuna sheep and contained calcium and magnesium phosphate. When the latter was burned an incombustible residue remained. These bezoars were so highly esteemed, particularly during the Middle Ages, that they were more precious than gold. Frequently counterfeits were made of them. Lonicer,<sup>2</sup> in 1582, devised some simple tests by which the true bezoar could be detected from the pseudo-bezoar: a red hot needle pierced into a bezoar stone would produce no smoke; powder made from the stone would cure a poisoned man or beast; the stone mixed with saliva or water would discolor cloth.

Both the tincture and the powder of bezoars can be found as an official remedy and were admitted into the London pharmacopoeia until the middle of the Eighteenth Century.<sup>11</sup>

#### TYPES AND COMPOSITION

Several varieties of bezoars will be classified: (1) trichobezoars, (2) phytobezoars, (3) trichophytobezoars, (4) concretions. It is the phytobezoars of the persimmon variety (phytobezoar diospyri vir-

ginianae) or (diospyrobezoar)<sup>4</sup> that this report deals.

Bezoars may consist of plant fibers, hair or persimmon seeds, or they may accumulate following the repeated ingestion of shellac, varnish, lacquer, furniture polish or some other solid residues in alcoholic suspension. Subsequent ingestion of water precipitates the resins which accumulate in the stomach. A small amount will pass through the gastrointestinal tract, but repeated ingestion accounts for the large masses, from 1,500 to 2,000 grams, which have been found in the human stomach.

The first reported case of phytobezoar was that of Bucknill, which was reported by Quain in 1854.



Fig. 1. Roentgenogram on December 12, 1947, showing phytobezoar and crater.

The mass was composed of string and coconut fiber. The patient was an epileptic man of 22 years, who was accustomed to eating dirt, gravel and other debris, of which he ridded himself by diarrhea. However, at one time within twenty-four hours following an acute pain and showing symptoms of peritonitis he went to rapid death. Autopsy revealed a perforation larger than a shilling on the lesser curvature of an otherwise healthy stomach, the lumen of which bulged with the four pound mass.<sup>12</sup>

Phytobezoars today refer to gastric concretions composed of vegetable matter such as skin, seeds, and the fibers of fruits and vegetables. They are commonly known as "food balls."

The etiology of phytobezoars, especially of the persimmon type, has been most positively explained by Izumi, Isida and Iwamoto in their article on the

process of formation of the persimmon bezoar. They found a substance called shibuol (phlobotannin, phloroglucin and gallic acid) which is present in great quantities in unripe fruit; also in smaller amounts under the fruit skin and the calyx of the ripened fruit. This soluble shibuol coagulates in the presence of weak mineral acids and it has been proven that the gastric juice, though weak in acidity, is capable of precipitating the shibuol and coagulating it rapidly at body temperature. Also, shibuol has properties of inhibiting the action of the digestive enzymes, thus preventing ingestion of the mass before it can be solidified.<sup>13</sup>

When the persimmon which still contains some soluble shibuol, and accordingly is astringent in taste, is ingested unpeeled with the skin, and especially when it is taken alone or with only a little other food into an empty stomach, as it is with most of the reported cases, coagulation of soluble shibuol will occur in the interfragmental spaces under the influence of the gastric juice. As the coagulum of shibuol is a sticky mass, it may cement the pieces of skin into a ball, thus forming a phytobezoar.

#### BEZOAR AND ULCERS

Gastric ulceration has been associated with bezoar on numerous occasions; also with other types of foreign bodies. Ulcers also may occur from other types of trauma to the stomach, such as a herniation of the stomach through the diaphragm. It has been shown that trauma has had a decided effect in the etiology of these cases by the fact that they usually disappear following the removal of the irritative substance. Probably the most obvious explanation for the higher incidence of gastroduodenal ulceration in phytobezoars is due to the fact that they are more likely to be multiple, of harder consistency and more irregular in surface, thus causing more irritation.<sup>4</sup>

In a series of fifteen cases by Balfour and Good, persimmon bezoar was associated with ulcer on four occasions. Of these, resection of the ulcer was done in two cases and in the other two cases nothing was done to the ulcer. Cohn and White declared that ulceration of the gastric mucosa was present in 23 per cent of the cases of phytobezoars and approximately 80 per cent of the gastric ulcers which occurred in this condition were located on the lesser curvature of the stomach. This figure is similar to that seen in gastric ulcers in general.<sup>3</sup>

Internal trauma of the stomach occurs from foreign bodies. Such ulcers may occur anywhere in the gastric mucosa. That rough food may be a factor in the production of gastric ulcer is a plausible but still unproved theory. Man, who seldom eats much rough food, has gastroduodenal ulceration while, in the dog, who eats whole meals of bones, gastroduodenal ulceration is extremely rare.<sup>14</sup> If a rabbit is kept on a rough diet after a small area of gastric mucosa is removed surgically, it develops a chronic gastric ulceration. The ulcer may persist as a chronic ulcer for two years on such



a diet, but, soon after a diet of bread and milk is fed the ulcer heals.<sup>15</sup>

The concept of a gastric pathway for a transference of gastric contents to the pylorus along the lesser curvature would seem to be supported by this fact. A foreign body thus would interfere with proper emptying of the stomach and would prevent the regurgitation of duodenal contents back into the antrum of the stomach. The failure in this fashion partially to neutralize the gastric acidity in this region might predispose to the formation of ulcers. The lesser curvature, which has inherent vulnerability to the formation of peptic ulceration, would thus be the logical site for ulcer formation. While the presence of the bezoar may be considered a predisposing factor to the formation of ulcer, there must be other precipitating causes not present in the great majority of ulcers since, in their series of cases, 77 per cent did not show ulceration.

Cook has failed to find that food entering the stomach follows this *magenstrasse*. The one place at which all food must necessarily follow a circumscribed pathway—the pyloric sphincter—is notably free from ulceration. Alvarez says, "The *magenstrasse* as a cause for ulcer is a myth." Irritation by rough food as the chief factor cannot explain the fact that 3 per cent or less of gastroduodenal ulcers occur at the pyloric sphincter, through which all rough food must pass.<sup>16</sup>

DeBakey and Ochsner reported a series of ninety-four collected cases of phytobezoar in which ulceration occurred in twenty-three, or 24.4 per cent, but only one, 14.2 per cent, of their own series of seven cases had this complication. Their concept of the formation of ulcers was as follows: They maintain that ulcers are established by the summation of two groups of factors; the first, the predisposing which are inherent and therefore uncontrollable and, secondly, the precipitating, which are controllable. The former group is composed of (a) tissue susceptibility, which may be defined as an inherent vulnerability of certain portions of the gastrointestinal tract, such as the lesser curvature of the stomach and the duodenal cap, to the digestive eroding effect of the acid gastric juice; (b) constitutional, which is extremely difficult to define and must be considered as an ingrained susceptibility of certain individuals to gastroduodenal ulceration. Whereas the former innate characteristic is present in all individuals, the latter exists only in those individuals who develop ulcer in the presence of the precipitating factors. Thus, both these predisposing factors, i. e., tissue susceptibility and constitutional predisposition, may be present in an individual without peptic ulcer necessarily developing. However, ulceration does occur if to this predisposing group there are added the precipitating factors which consist of (a) chemical, (b) mechanical or traumatic, (c) infection.

On this basis a ready and satisfactory explanation exists for the development of ulcers in that group of bezoar patients having this complication,

as well as those in which ulcers do not occur. The precipitating factor exists in both groups but the constitutional factor is present only in the former. In order for ulcer to develop, both factors necessarily must be present. The fact that the removal of the precipitating factor, or the bezoar, is almost invariably followed by the disappearance of the ulcer further corroborates this hypothesis.<sup>4</sup>

John Hancock reports that an ulcer of the stomach may be present with and caused by bezoar, or the bezoar may be found in the presence of a deep crater of a healed ulcer. He reported two cases with acute gastric hemorrhage without diarrhea. Occult blood has been found in the stomach contents and stools, without ulcer. In fact, gastric hemorrhage, ulcer formation and immobility of the tumor are compatible with presence of bezoars in the stomach that have led to radiologic diagnosis of malignant, inoperable tumors.<sup>5</sup>

Hoge reported a case of ulcer with phytobezoar; the ulcer occurred on the lesser curvature of the stomach and the ulcer also antedated eating of persimmons. Occult blood was positive in gastric analysis and in view of the history it was considered probable that the ulcer antedated the bezoar and that it might possibly be malignant, therefore, subtotal gastric resection was done, two thirds of the stomach being removed.<sup>6</sup>

McNeill reports a case of phytobezoar with ulceration on the greater curvature of the stomach about midway between the middle of the stomach and the pylorus. This ulcer was suspected of being malignant; it was resected and found on pathologic examination to be a benign ulcer.<sup>7</sup>

Pollok states in his series that phytobezoar was associated with gastric ulcer in only four instances. In one patient the roentgen ray examination disclosed both the ulcer and the phytobezoar as a mass in the *pars cardiaca*, but in another only the ulcer. In the latter case a gastroenterostomy was done for relief of the ulcer, as the presence of phytobezoar was not suspected. Phytobezoar was not discovered until a second operation was performed several months later because of symptoms of acute intestinal obstruction. In both instances the mass was a typical persimmon bezoar and the symptoms of gastric ulcer had been present before the persimmons were eaten. The persimmons evidently caused an acute exacerbation of the pain and nausea.<sup>8</sup>

Allen reported three cases in the *American Journal of Roentgenology*. Two cases had gastric ulcers and one a perforating duodenal ulcer. He also reviewed thirty-nine cases in which ulcer occurred in nine cases.<sup>9</sup>

Age seems to have no effect in the formation of bezoars as cases of bezoars have been reported between the ages of 6 and 75 years. However, DeBakey and Ochsner showed that approximately 80 per cent of the patients with phytobezoar in their series of collected cases are of the male sex and are more than 30 years of age. The presence of per-

simmon bezoars is manifested within a relatively short time after ingestion of the fruit and there is a seasonal incidence in the late fall and early winter, when persimmons are ripening. Most patients in their histories report eating rather large amounts of the fruit on an empty stomach. Vigorous peristalsis under these circumstances has been thought to mold the pulp into a compact mass.

Allen states that all of the persimmon seed may form a part of the mass; its necessity as a nucleus does not appear to be essential. It is probable that the presence of other food in the stomach at the



Fig. 2. Roentgenogram on December 18, 1947, with deep concentration of barium.

time of ingestion of persimmons keeps the latter from forming into a mass, and only when they are eaten on an empty stomach do the cases of phytobezoar appear.

Rodgers states that the ideal conditions for the formation of phytobezoar exists, in other words, in hunger, an empty stomach, hydrochloric acid and persimmons. However, Hart cites a case of achylia gastrica in bezoar in which following the administration of dilute hydrochloric acid a cure without surgery was effected as shown by the disappearance of the bezoar on the roentgen ray examination, showing that hydrochloric acid was probably not necessarily essential for the formation of the bezoar.

#### INTESTINAL OBSTRUCTION AND BEZOARS

Intestinal obstruction is more frequent in phytobezoars than in any of the other types. The possibility of obstruction with the consequent manifestations of mechanical ileus is more frequent in phytobezoars due to the fact that they are more likely to be multiple, of harder consistency and irregular in character.

Hancock cites a case in which massage for two weeks over the stomach region in a boy 14 years of age resulted in complete elimination by the rectum. This was proved conclusively by roentgen ray findings before and after.

DeBakey and Ochsner, in a series of seven cases, found intestinal obstruction occurred in three, or 42.8 per cent. It is felt that the irregularity of the bezoars has much to do with their passage out of the stomach into the small bowel, consequently causing obstruction. The bezoars may pass through the pylorus in one position, following down the small bowel in the same position until either turning in a different direction and lodging near the ligament of Treitz, due to the small bowel narrowing at that place or at the ileocolic junction, these two places being the most consistent sites of obstruction. Pyloric stenosis as a predisposing or essential item, causation of either obstruction or the formation of the bezoars, is conspicuous by its absence.

#### SIGNS AND SYMPTOMS

Signs and symptoms of the presence of bezoars are commonly found to be different in each patient. However, the ones most universally described, and also found by us, are as follow: A sensation of lump or a palpable mass in the epigastrium which disappears and reappears on examination; an acute gastritis and gastroenteritis of a severe type, appearing as a rule immediately after eating; pain which is paroxysmal in character. After the acute symptoms have subsided the most striking feature of the syndrome is that, in spite of the persistence and the severity of the symptoms, the patients remain in general good health and are well nourished. Also, the gastrointestinal symptoms bear no relation to meals and are not seasonal in type.

Other symptoms, such as weight loss, ulcer symptoms, epigastric tenderness and severe abdominal pain, along with eructation, hematemesis, tarry stools and visible peristalsis have been noted. In the differential diagnosis phytobezoar must be differentiated from (1) gastric carcinoma, (2) peptic ulcer, (3) cholecystitis, (4) other upper abdominal diseases. The main differential points are the finding of the translucent mass on roentgen ray of the stomach and of the history of ingestion of persimmons.

#### DIAGNOSIS

The diagnosis should be based more on the history and the roentgen ray findings than on the physical examination. The physical examination is not significant unless a mass is palpable. Also, the laboratory findings are inconsistent.

The history is usually of repeated ingestion of materials previously described, or ingestion of persimmons. In the roentgen ray, findings are characteristic and conclusive. When barium is administered there may be a hesitancy as it enters the stomach. The barium meal will then be observed to pass around a mass of lesser density or translucency, much like a rivulet of water going around



a rock. As the barium leaves the stomach a thin film of the barium will adhere to and surround the mass. The mass is movable within the stomach and moving the mass does not produce dimpling of the wall as in polyps with a long pedicle.

#### TREATMENT

In our opinion there is only one treatment—surgical removal of the foreign body. However, we feel that when bezoars are associated with intestinal obstruction the patient should be put on a negative suction (Wangenstein), with parenteral fluids, to correct the patient's fluid balance and blood chemistry before surgery.

Much work has been done trying to find a suitable solvent for foreign bodies in the stomach. To date, however, a solvent for the bezoars to be used without detriment to the tissues has not been found.

#### REPORT OF A CASE

A man, aged 59 years, was first seen December 12, 1947, by James O'Donoghue, M.D., complaining of indigestion and a pressure in the epigastrium which seemed to move downward to below the umbilicus. He was roentgen rayed and told the diagnosis was gastric ulcer and bezoars. He refused operation at that time. He was next seen January 5, 1948, in the Clinic, and sent to the hospital, at which time he stated that six weeks prior to admission, November 24, 1947, he had eaten "a lot of persimmons—probably a quart," which he had picked up in the snow in his yard. The following day he began having abdominal distress; also had symptoms of a choking sensation and a pressure in the epigastrium which later moved downward to below the umbilicus. He had no vomiting, however, until two days before admission, when he vomited three or four times. He was constipated for three weeks after onset of eating persimmons, but with the aid of laxatives maintained regular bowel movements daily up until the onset of the vomiting. He had a weight loss of four to five pounds in two months.

Urinalysis was essentially normal except for albumin sulfosalicylic acid, 1 plus. Blood examination showed hemoglobin 15.2 grams, erythrocytes 5,950,000, leukocytes 22,800. Differential examination of the blood showed small lymphocytes 13, monocytes 3, polymononuclear leukocytes 84, breaking down into band forms 20 and segmented cells 64. Wassermann was negative. Sedimentation rate at that time was 6 mm. per hour.

Gastric analysis showed free hydrochloric acid, fasting specimen, 0°, forty-five minutes 0°, one hour 0°. Total hydrochloric acid, fasting specimen, 60°, forty-five minutes 20°, one hour 30°. Lactic acid was negative. Fifteen cc. of a heavy grayish fluid was aspirated on a fasting stomach.

The roentgenogram of the chest was normal. Examination by means of roentgen ray series of the upper gastrointestinal tract December 12, 1947, revealed the following: Fluoroscopic examination revealed the presence of four freely movable, oblong, rounded, sharply defined, radiolucent bodies floating through the barium mixture within the stomach. In addition, there was a large crater about 1 cm. wide and deep on the lesser curvature of the stomach in the pars media. These findings were characteristic of bezoars and a peptic ulcer. Reexamination four hours after the meal revealed

traces of barium within the stomach in addition to the four previously described radiolucent bodies, which contained multiple flecks of barium.

On December 18, 1947, reexamination of the upper gastrointestinal tract again revealed the same findings which were demonstrated on December 12, 1947.

Due to the vomiting the patient was believed to have a high intestinal obstruction, probably in the duodenum, because it was felt that most cases of obstruction due to this type fail to pass the duodenojejunal junction.

Patient was placed on Wangenstein suction and parenteral fluids (3,000 cc. daily), 1,000 cc. 10 per cent glucose in water, 1,000 cc. 5 per cent glucose, with one ampule Lyo B. C. and 1,000 cc. amigen.

In spite of satisfactory suction, the patient's cramp-like pain continued and his abdomen became distended. Patient's fluid balance and blood chemistry being satisfactory, it was deemed advisable to operate on him on January 8, 1948.

Abdominal exploration was performed by one of us (Knepper) January 8, 1948. An upper left rectus incision was made. An acute intestinal obstruction involving the small bowel was found. About eight inches from the ileocecal valve a bezoar approximately 2 by 1½ inches was encountered. The bezoar was removed through a longitudinal incision in the bowel and the bowel closed transversely, using a Connell stitch, reinforced by interrupted silk sutures for closure. There was evidence of darkening of the bowel above the site of obstruction for several feet, but the bowel contracted and there was no evidence of gangrene. The entire intestinal tract was examined without further evidence of bezoars. A transverse incision was made in the midportion of the anterior wall of the stomach. On the posterior wall of the stomach, near the angle and on the lesser curvature side, an ulcer was found, 2 cm. in diameter, which was acutely inflamed and had a punched out center with rounded edges. The posterior wall of the stomach was attached to the pancreas at the site of the ulcer. The appearance of the ulcer was benign and strongly suggested that it was the direct result of the bezoars. Three bezoars were removed from the stomach, the largest approximately 3 by 2 by 2 inches. This corresponded to the number, namely four, that were seen on the first roentgen ray and three that were seen in a later roentgen ray. The wound was closed in layers, silk in the fascia, with one Penrose drain.

Convalescence from the operation was somewhat stormy, complicated by postoperative pneumonia and wound drainage. No fistulas from either opening in the gastrointestinal tract developed. The patient was discharged January 26, 1948, from the hospital and roentgen rays on February 20, 1948, of both stomach and duodenum showed the ulcer to be healed and a stasis ray of the small bowel was done, showing no evidence of stricture or fistula in the gastrointestinal tract.

On April 6, 1948, postoperative reexamination of the upper gastrointestinal tract by means of barium meal failed to reveal the previously described crater on the lesser curvature of the stomach. The radiolucent masses observed on previous examinations were no longer visualized. Peristaltic activity extended uninterruptedly through the stomach into the duodenum and there was no evidence of delay in the passage of the barium.

The patient was discharged at three months to return to hard labor as a carpenter. He has had no further complaints.

825 Charles Street.

## BIBLIOGRAPHY

1. Allen, L. G.: Phytobezoar: Report of Three Cases, *Am. J. Roentgenol.* **39**:67-74 (January) 1938.
2. Balfour, D. C., and Good, R. W.: Phytobezoar Associated With Gastric Ulcer, *Am. J. Surg.* **6**:579-587 (May) 1929.
3. Cohn, A. L., and White, A. S.: The Gastroscopic Diagnosis of Phytobezoar, *Am. J. Surg.* **51**:432-435 (February) 1941.
4. DeBakey, M., and Oshsner, A.: Bezoars in Concretions, *Surgery* **4**:934-963 (December) 1938; **5**:132-160 (January) 1939. *M. S.* **39** (December) 1942.
5. Hancock, J. C.: Japanese Persimmons Bezoars, *J. Iowa M. S.* (June) 1938.
6. Hoge, A. F.: Phytobezoar; Report of a Case, *J. Arkansas M. S.* **39** (December) 1942.
7. McNeill, J. H.: Persimmons Phytobezoar with Case Report, *Ann. Int. Med.* **14**:2142-2147 (May) 1941.
8. Pollok, L. W.: Phytobezoar with Gastric Ulcer, *Texas State J. Med.* **27**:20-22 (May) 1931.
9. Rodgers, F. D.: Phytobezoar of Persimmon Origin, *Radiology* **29**:494-495 (October) 1937.
10. Hart, W. E.: Phytobezoars, *J. A. M. A.* **81**:1870, 1923.
11. Robinson, J.: *The Story of Medicine*, A & X Boni, New York, 1931, p. 167.
12. Bucknill: *Tr. Path. Soc. London*, 1853-1854, quoted by Balfour, G.
13. Izuma, S.; Isida, and Iwamoto, M.: The Mechanics of Formation of Phytobezoars with Special Reference to the Persimmon Ball, *Jap. J. M. Sc.* **2**:21, 1933, as quoted by McNeill.
14. Cook, Donald: Ulcer, Primary Cause, Diagnosis, Treatment, Prevention, Medical Center Foundation and Fund, 1946.
15. Ivy, A. C.: Personal communication, quoted by Cook, Donald.
16. Alvarez, W. C.: *An Introduction to Gastro-Enterology*, Paul B. Hoeber, New York, 1940. p. 13.

## EXAMINATION OF THE MALE FOR STERILITY

WILLIAM F. MELICK, M.D., *St. Louis*

WITHOUT REGARD to pain, time or expense, a wife will consent to any proposed examinations to check her generative system for possible factors influencing fertility. In the husband it is quite another story. The average male, who mistakenly associates possible sterility with possible implied impotency, usually has to be driven to the physician and, often with great reluctance, submits to examination. Reports in the literature indicate that the male is at fault in at least one third of barren marriages. Since the examination in men is so much easier to do, no sterility examination in a barren marriage is complete unless the male also is checked at some point during his wife's examination. Because of the increased awareness of the obstetrician and general practitioner that the male may be at fault, an increasing number of men are being examined.

This article is written to emphasize the necessity to use all information that is known when evaluating a possible sterile male. There are, as anyone who has even lightly considered the problem of sterility knows, so many factors about which little or nothing is known that it is imperative to use all of the possible studies which are available at present. Lest this seem uncalled for, I should like to cite a few of my own cases to show what can happen unless all of the known factors are used.

Case 1: A 38-year-old white male had been married for thirteen years. There were no children. There had been no use of contraceptives and the past history disclosed no obvious causes in either the patient or his wife. The physical examination was negative except for mild obesity but the basal metabolic rate was within normal limits. Urologic examination revealed a chronic prostatitis. When this was found the patient volunteered the information that this had been found by a previous physician and that he had been given prostatic treatments for a year without results. No semen examinations had been done. A semen examination showed a sperm count of 10 million per cc. with poor longevity and only 60 per cent motility. The patient was given hormonal therapy as well as prostatic treatments. At the end of six weeks the count was 40 million with

normal motility and longevity. After another six weeks of treatment the count was 50 million. Observation over the next two months showed the count to remain at this level and his wife became pregnant.

Case 2: A 34-year-old white male was sent in because a Huhner test had failed to show any spermatozoa. The past history revealed that this same thing had been found by another physician, and the patient had been informed that the situation was hopeless and since "he had no spermatozoa, could never have any children." Physical and urologic examinations were entirely normal. A semen specimen was also completely normal. The count was 212 million sperm per cc., the morphology was entirely normal and good motility was present at the end of eighteen hours.

This last case illustration was put in, not to try to detract from the tremendous physiologic value of the Huhner test, but to point out that it should only be used as a rough screening test. A poor, or even negative Huhner test, obtained as they so frequently are, by the couple having intercourse at home and then coming to the physician's office, may be absolutely meaningless. Yet even today some physicians persist in treating male sterility cases on the basis of a poor Huhner test.

Case 3: A 26-year-old white male was referred by an internist because of relative impotence. The history revealed that coitus was attempted about every two or three months with indifferent success. Urologic examination showed a posterior urethritis and a chronic prostatitis so that local treatments were started. After several weeks of treatment the patient rather casually asked: "Could this have anything to do with my wife not becoming pregnant?" Further questioning revealed that his wife had been receiving treatments for supposed sterility during the last year.

These things all seem so elementary that one may well believe that they are isolated instances, yet the literature is full of similar instances. In the study of any suspected sterile person, one must use to the best possible advantage all of the known aspects of sterility if he honestly intends to study the patient as best he can. If one has not the time nor interest to carry out the sterility study and use what little is known, then it would be far better for the patient to receive no study at all. I should like to review the following factors, some of which may seem ele-



mentary, which must be considered in evaluating the relative fertility of the male.

#### HISTORY

A routine history is essential. One should consider all of the past systemic diseases which may affect the testis: severe systemic febrile states, especially if recent; mumps with possible orchitis; rickettsial infections; tuberculosis, and the venereal diseases. All can, but do not necessarily, effect relative sterility. Secondly, the history of possible scrotal trauma, injury, operations, roentgen ray or radium damage must be considered. Thirdly, habits including diet, drugs, alcohol and tobacco, all must be checked carefully. Previous marriages with possible children must be considered carefully, the old expression that "it is a wise child who knows his own father" may be appropos in such cases.

Lastly, a careful and thorough sex history must be taken. This has been emphasized repeatedly in the literature, but it is here that perhaps most mistakes are made. The correct performance of the sex act is so taken for granted that one is prone not to go into detail, thus leading to the type of error noted in case 3 cited. One must ask about preliminary sex play, presence of erection, technics including penetration, ejaculation, frequency of coitus and its distribution throughout the menstrual cycle. If contraception has ever been practiced, the details of what type was used, and the how, when and why must be discussed completely.

#### PHYSICAL AND UROLOGICAL EXAMINATION

A reasonably complete physical examination must be done. One should keep in mind particularly those factors which may indicate possible endocrine imbalances. Weigh, habitus and fat distribution may suggest hypothyroidism or Frolich's syndrome. Rapid pulse, tremor and undue muscle group fatigue may suggest hyperthyroidism. Abnormal hair distribution and hypertension may suggest adrenal disorders. All must be evaluated.

The urologic examination should include careful palpation of the scrotal contents. The size, shape, position and consistency of the testes must be evaluated. It should also be remembered that not only is the epididymis palpable, but also the vas on each side is palpable up to, and sometimes even beyond, the external ring. Rectal examination of the prostate and seminal vesicles should show their size, shape and consistency. The secretion obtained after massage should be examined for the presence of pus. If pus is found, however, one still must remember that this may or may not be an important factor. Certain types of organisms which have been found in prostatic secretions have been shown by recent investigations to immobilize spermatozoa. On the other hand, many patients with chronic prostatitis are seen who are certainly far from sterile. At any rate the information is of value in judging the case, but the examination must proceed.

Special urologic examinations to catheterize and

inject the seminal vesicles may be of value in demonstrating a block in the vas, but are not nearly as important as testicular biopsy in cases of aspermia. In my opinion, catheterization of the ejaculatory ducts is of little value in the initial sterility examination.

#### SEMEN EXAMINATION

It will soon be discovered that the vast majority of patients prefer to bring in a specimen. The specimen should be taken after an abstinence of at least seventy-two hours. The ideal way to collect a specimen would be for the patient to practice withdrawal just before ejaculation and to collect the specimen in a clean, dry bottle, stripping the urethra to collect the last portions of the ejaculate. It must be remembered that water is a spermicide and the bottle must be dry. Unfortunately, from an investigative standpoint, Catholic patients are forbidden, by the ethics of their religion, from so obtaining a specimen. Catholic patients must use a carefully washed and dried condom containing a small pin-hole. Immediately after it is so obtained, it should be removed from the condom and transferred to the bottle. The easiest way to do this is to cut the end of the condom while holding it over the bottle and squeeze the contents out. It must always be remembered that even with these precautions a condom specimen may exhibit poor motility and longevity since it has been shown by many workers that the rubber may have an injurious effect on the sperm. In any event the condom must be completely dried before the specimen is collected. It is suggested in Catholic patients, whose specimens show poor motility and longevity, that it is also ethical to have them practice withdrawal immediately after ejaculation has started and then to collect the last of the ejaculate and urethral strippings into a bottle. Such a specimen may be used to judge motility and longevity. Heat is far more injurious to spermatozoa than cold so no special instructions such as placing it next to the body or putting it in warm water should be given the patient. In any event, placing it in the coat pocket is sufficient. The examination should be started within an hour or sooner, if possible, of the time that the specimen is obtained.

#### EXAMINATION OF THE SPECIMEN

1. *Total Volume*.—Wide fluctuations in the total volume are seen depending upon the frequency and interval between coitus. It affects, of course, the total count. Normal values run from 1.5 to 7.5 cc. with the average being from 3 to 5 cc. The total volume of the specimen should be noted.

2. *Viscosity*.—Elaborate means have been devised for measuring the actual viscosity, but are rarely necessary. Viscosity is of importance as an increased viscosity may result in impaired motility. After lysis has occurred, normal semen will drip from an applicator stick while, with increased viscosity, the specimen clings to the stick as it is being withdrawn. The causes of aberrations in viscosity

are not well understood, but presumably are due to changes in the seminal vesicle and prostatic secretions.

3. *Sperm Count*.—There are several acceptable ways of doing a count. A diluting fluid must be used which will immobilize the sperm and dissolve the mucin. The bicarbonate-formalin solution works well and is made as follows:

Sodium bicarbonate	5.0 grams
Formalin	1.0 cc.
Water q.s.a.d.	100.0 cc.

An ordinary white cell pipette is filled to the 0.5 mark with semen and is then filled with the counting fluid. The ordinary Neubauer counting chamber is filled as for a blood count. The cells in the four outside chambers are counted and this figure is multiplied by 50, and then by 1,000 to give the number of spermatozoa per cc. Again, statistics in the literature vary widely, but most investigators feel that 60 million sperm per cc. is the lowest acceptable normal level. The count will fluctuate with the frequency of intercourse so that it is best to have a specimen obtained after three days of abstinence.

4. *Motility and Longevity*.—Probably the most important factor in sterility studies is the duration of active motion. Motility and longevity are most affected by temperature and age of the specimen. In normal specimens, active motility should be maintained at room temperature for at least three to five hours, while some motility may be noted as long as eighteen to twenty-four hours. Motility is best in specimens after lysis has occurred. Clinical operative findings have demonstrated living sperm in the fallopian tube many days after coitus. Recent studies in women have shown definitely that the normal cervical secretion is a better media for spermatozoa and stimulates more active motion than the seminal fluids.

While the danger of comparing animals with men in fertility studies must be kept in mind constantly, it is interesting to note that the semen of many species of animals show a rather surprising antagonistic effect of prostatic and seminal secretions. Again, animal experiments have shown that whereas sperm may become rapidly immobile if kept in the semen pool, in Ringer solutions they will live much longer. If repeatedly washed and resuspended in a Ringer-glucose-egg albumin media, they can be kept almost indefinitely under refrigeration. Animals may be impregnated weeks later with such solutions, thus proving the viability of the sperm in them. Work with human spermatozoa have indicated that fructose, rather than glucose, may be the ideal carbohydrate for human sperm.

Immobile sperm may be dead, but not necessarily so. The harmful effects of condom collection have already been mentioned, but there are other factors about which little is known. The following case is cited as an example.

Case 4. The patient was a 26-year-old white male, married for four years without pregnancy of the wife.

Repeated Huhner tests showed immotile spermatozoa. Semen studies brought out these following facts: the total volume was normal, as was the viscosity, the count was 60 million sperm per cc., and none of these was motile. Treatment over the next six weeks did not succeed in raising the sperm count, and the sperm were still immotile. On the suggestion of Dr. L. S. N. Walsh, a specimen was obtained, washed repeatedly with saline, and resuspended in a saline-blood serum solution where immediate weak motility was seen.

Further work is being done to see if this has any clinical application and will be reported on at a later date. It does clearly indicate, however, that immotile sperm are not necessarily dead.

5. *Morphology*.—To grade morphology is a difficult matter. One has either to stain the sperm and then check them off individually as one would do in a differential white count, or use some projection means and measure the head lengths. Moench has reported that abnormal sperm heads in normal fertile men never exceeded 20 per cent and if 25 per cent abnormalities were found the patient was "clinically sterile." He was of the opinion that narrowed, tapered heads were a particularly bad finding and sterility was present if from 8 to 10 per cent of the sperm heads were so formed. Hotchkiss, in an examination of 200 fertile men, reported 89.8 per cent incidence of normal ("oval") cells, with a range of from 65.7 to 98.8 per cent. In 105 men, whose wives were considered normal, yet who had no children, the incidence was 84.1 per cent and the range was from 25 per cent to 100 per cent. It also has been suspected that abnormal spermatozoa may be a causative factor in miscarriage, but the certainly has not been proven.

There are several reasonably satisfactory stains for spermatozoa. The one advocated by Williams gives good results:

Technic:

1. Fix slide with moderate heat after air drying.
2. Drop on 0.5 per cent chlorozone for three minutes.
3. Stain with Stain No. 1 for two minutes.
4. Wash with water.
5. Counterstain for from four to ten seconds with Stain No. 2.
6. Wash with water and dry.

Stain No. 1:

Saturated alcoholic solution of	
eosin (bluish)	1 part.
Ziehl-Nielsen carbolfuchsin	2 parts.
95 per cent alcohol	1 part.

Stain No. 2:

Loeffler's methylene blue	1 part.
Distilled water	6 parts.

6. *Testicular Biopsy*.—Testicular biopsy is not part of the routine sterility examination, but certainly should be done if no sperm or parts of sperm are ever found in repeated semen studies. It can be done under local anesthesia as an outpatient procedure wherever facilities are available for minor surgical procedures. I mention it here because I have seen patients who had epididymo-vas



anastomoses done elsewhere without a biopsy having first been done. Unless one is sure that the testes have normal spermatogenesis, it is foolish to advise an attempt at reanastomosis. Many cases in which sperm are not present are due to a primary failure of the testis to produce sperm and are not due to blockage.

Case 5. A 32-year-old white male had been married for twelve years. His past history showed three previous investigations for sterility, all with the findings of aspermia. He had been told that his physical examinations were normal and had been treated with gonadotropic hormones. (No testosterone had been given.) Careful palpation of the testes revealed a bilateral testicular atrophy. Testicular biopsy showed a complete lack of spermatogenesis. This case is, of course, one in which no therapy can hope to produce any results. Much time and expense could have been saved had the physical examination been done carefully and testicular biopsy carried out initially.

#### OTHER TESTS DESIRABLE AT TIMES

A. *Hormonal Assays.*—This is rarely practical or available at present. When the chemistry of such substances becomes better known and standardized, it may some day be of tremendous value.

B. *Basal Metabolism Rate.*—Because of the tremendous part that the thyroid plays in controlling the gonads, this should be done if the examination indicates any possible metabolic disorder.

C. *Blood Vitamin C Levels.*—Experimental work in cows has shown that the vitamin C level rises tremendously just before, or with the onset, of estrus. Furthermore, sterile cows have been found to lack this rise and have been treated successfully with large amounts of vitamin C. In patients with poor sperm specimens it would, therefore, seem of some value to be sure that the vitamin C level is normal because of the possible relationship of C with the gonads.

#### DISCUSSION

Investigation of the male may be carried out so easily that in cases of sterile marriages, the husband should be checked, either before or along with investigation of his wife. In any suspected sterile marriage, the male may be normal, or have varying degrees of impairment down to frank sterility. While it is perhaps an easy matter to determine that a male is either normal, or absolutely sterile, the cause of sterility in any given couple may be hard, or impossible, to determine. In many such cases it is likely that the cause for the sterility in the couple may be minor impairments in both partners. In such cases the prognosis is more favorable, for it is this type of sterility which usually responds most readily to treatment or correction of the defects of both husband and wife. Neither the urologist nor the gynecologist should be satisfied to find one or more rather obvious defects and to immediately conclude that they alone are responsible without evaluating all the known, possible factors.

It seems so obvious that the work-up of the male

should be extremely complete, particularly with respect to a complete history of all possible factors in the past which could influence fertility, an intimate and detailed sexual history, a complete physical examination with particular emphasis on the generative tract and, lastly, a semen examination, that one might mention it reluctantly. However, as the literature is full of mistakes that have been made because the physician did not do these things and, as can be seen from the cases cited, these mistakes continue to be made every day, one must again reemphasize these factors. I am forced to the reluctant conclusion that, because there are so many factors in sterility about which almost nothing is known, unless one will take the time and effort to evaluate properly these patients in the light of all that is known, the patient is better off if he is not studied at all than if he is studied incompletely and judged.

The identification and quantitative measurement of the 17 ketosteroids, or of any of the other of the hundreds of breakdown products of the male or female androgens, is so complicated that hormonal assay at present is not practical. A careful physical examination of the suspected male, with the view of possible endocrine disturbances, remains the best alternative and must be utilized in every suspect. Careful palpation of the scrotal contents is not always done, although it seems rather elementary. Atrophy of the testes, chronic epididymitis and even congenital absence of the vas are readily recognizable. Malformations of the vas may not be recognized until the time of operation, but even here the patient is spared much time, expense and uncertainty.

To evaluate male sterility without a semen specimen would seem as futile as a study of anemia without a blood study, yet it seems to be a common occurrence. There is no excuse for not examining the semen, either from a medical or a religious standpoint. An adequate semen study should at least note the total volume, the spermatozoa per cc., the viscosity, the degree of motility, the longevity and, in doubtful cases, the morphology. It is admitted that as yet no exact answers for all findings, or anything other than a wide range of averages for normals are known. Yet, from the standpoint of controls, it is far better than anything else which is available at present. It is certainly better than doing a Huhner on a woman who has traveled blocks, or even miles, to the office since intercourse, during which time the sperm may have leaked out and, deciding that since no sperm are present, the husband must be sterile.

Many of the final answers admittedly have not yet been found. If, as has been shown, immotile sperm can be activated and made motile, it is obvious that sperm which were once considered dead are not necessarily so. Likewise, it is entirely likely that sperm which move and appear on present studies to be completely normal, may not possess the power of fertilization. It seems strange, and as yet, entirely unexplained, that nature should pro-

vide millions of normal spermatozoa, with each ejaculation, yet only one is needed. One can only speculate, and a common belief is that tremendous numbers of sperm must fall by the wayside. If this reasoning is correct, then the total volume, the total number, the degree of motility and the longevity of spermatozoa are of primary importance. Until such time, however, that all factors are known, the plea is repeated, that the suspected male be evaluated in terms of complete history, physical examination, sexual habits and practices, semen examinations and other special tests where indicated.

#### SUMMARY

1. From my own experiences it would seem that the male partner in sterility cases has not been studied adequately in the past.

2. Careful history and physical examination is important with particular emphasis on the sexual history and generative tract.

3. A semen examination is essential and there is no religious objection to it provided, in the case of Catholic patients, that the specimens are obtained as noted.

4. The final answers have admittedly not yet been found, but from a consideration of what is known, if one makes use of all the means available, one can arrive at a reasonably correct evaluation of the degree of fertility of any given male.

539 N. Grand.

#### BIBLIOGRAPHY

1. Cary, W. H.: Sterility Diagnosis: Study of Sperm Cell Migration in Female, *New York State J. Med.* **30**:131, 1930.
2. Cary, W. H.: Duration of Sperm Cell Migration in Uterine Secretions, *J. A. M. A.* **112**:2221, 1936.
3. Hotchkiss, R. S.: Male Factor in Fertile and Barren Marriage, *New York State J. Med.* **41**:564, 1941.
4. Hotchkiss, R. S.: Fertility in Men, Philadelphia, J. B. Lippincott Co., 1944.
5. Moench, G. L.: Sperm Morphology in Relation to Fertility, *Am. J. Obst. & Gynec.* **22**:199, 1931.
6. Ransom, P. M.: Rubber and Sperm Survival, *Lancet* **1**:1400, 1937.
7. Williams, W. W., and Savage, A.: Methods Determining Reproductive Health and Fertility of Bulls, *Cornell Veterinarian*, 374:1927.

## DOUBLE SYMMETRIC MONSTERS

THORACOPAGUS TWINS, A CASE REPORT

JULIAN A. OSSMAN, M.D., *Jefferson City,*

AND

HORACE M. WILEY, M.D., *Jefferson City*

DOUBLE MONSTERS can be divided into symmetric and asymmetric. Symmetric monsters consist of two equal or nearly equal parts; asymmetric twin monsters in contrast are made up of two parts with marked difference in development of one part. Symmetric monsters are divided according to the anatomic site of fusion; when joined at the pelvis, ischiopagi; when joined at the thorax, thoracopagi, when joined at the cephalic end they are called cephalopagi. The case presented can best be classified as a symmetric thoracopagus twin or monster.

#### FREQUENCY AND ORIGIN

The incidence of double monsters is low. The statistics available are difficult to interpret. Mall<sup>1</sup> states that 7 per cent of all pregnancies terminate in aborted pathologic ova and about 0.6 per cent in malformed fetuses at term; of the latter only a small proportion are conjoined twins. Adair<sup>2</sup> reported two double monsters in 25,000 deliveries at the Chicago Lying-in Hospital. Gunter<sup>3</sup> states that it is estimated that twin monsters occur once in about 50,000 births. In man, female monsters are two or three times as frequent as male, although monozygotic male twins occur a little more frequently than females.<sup>4</sup> The ratio of all twins to single births is 1 to 85.2 according to Keevil.<sup>5</sup>

These monsters in general are thought to be monozygotic in origin. The exact abnormality resulting in these monstrosities is not known. Ab-

normalities of the sperm, ovary or both have been accused, as well as ovum fertilized by two spermatozoa, incomplete splitting of one original embryo or from the partial fusion of two original separate embryos. The reader is referred to such works as those of Ballantyne,<sup>6</sup> Marchand,<sup>7</sup> Ewing,<sup>8</sup> Hirst and Piersol<sup>9</sup> and Schwalbe<sup>10</sup> for more complete discussion of the origin of these monstrosities. In brief, monster formation can be regarded as a pathologic alteration in the development of the ovum and embryo and the discussion of etiology is therefore far reaching.

#### CASE REPORT

Mrs. F. R., secundigravida, aged 27, had a past history that was noncontributory. Her first pregnancy terminated May 29, 1945, at which time she was delivered of a normal full term male child by low forceps. Her first visit for her second pregnancy was on June 25, 1947, at which time she weighed 213 pounds. Serology and laboratory findings were normal. Pregnancy was uneventful and her last prenatal visit was Dec. 29, 1947. At that time her weight was 232 pounds. The position of the child could not be definitely made out due to the obesity but on rectal examination it was thought that the presentation was cephalic.

On January 6, 1948, at 3:30 a. m. the patient was admitted to the hospital. She was in active labor. On abdominal examination twins were suspected due to the multiplicity of small parts. Only one set of foetal heart tones, however, could be heard in the left mid-abdomen, rate 150.

Pains were of moderate intensity and no sedatives were given. The patient was completely dilated at 5:45 a. m. and she was taken to the delivery room. At

Presented in part before the Medical Staff, St. Mary's Hospital, Jefferson City.



that time the head had just begun to distend the perineum. The pains were frequent and hard and drop ether was given with each contraction. No further progress was made. With each subsequent pain the head would move forward and then retract. The previous episiotomy was reopened under local anesthesia and vaginal examination was performed. The pelvis was adequate and the head was in right occipito-anterior position. Low forceps was applied and traction exerted in time with the patient's expulsive efforts. The head was delivered in normal anterior position with much difficulty and as soon as the forceps was removed the head seemed to retract well into the vulva so that the air passages of the child were kept open only with difficulty. The child was viable and breathed readily. No further progress could be made.



Fig. 1. A thoracopagus monster is demonstrated with union anteriorly extending upward from the midpelvis to the midthoracic level inclusively. The cranial and face bones, the upper extremities, the rib cage and the vertebral column are complete. The skeleton has a complete hemipelvis with a complete lower extremity. Two centrally placed iliac bones are in direct alignment with their acetabular margins in apposition. Superior to the acetabular aspects is a small circular ossification center. A third complete lower extremity arises from this site.

The patient was placed under light ether anesthesia. Manual traction was made on the head which began to rotate externally to the right but after this had occurred things were again at a stand-still. Anesthesia was deepened and the hand was inserted along side the head (which was still snug in the vulva) and the right arm was brought down followed by the left. This allowed some forward progression but the vulva still encircled the upper arms and head tightly. A towel was placed about the arms and with the aid of pressure from above and the traction from below the back of the child rotated into the hollow of the sacrum. This



Fig. 2. Thoracopagus monster. The fusion in the lower thoracic region, the single umbilical cord and the molding of the head on the right are well shown.

allowed delivery of the upper thorax of the child and progress was again arrested.

Intravenous glucose was started, gown and gloves changed and the hand was introduced along the spine of the child and palpated to the anal cleft. No abnormality was found. The same procedure was done on the ventral surface of the child and at the base of the thorax a bony obstruction was encountered that seemed to hook under the symphysis of the mother. The operator's left hand was then reintroduced along the back of the child in an attempt to bring down a foot. The exposed trunk of the child was brought into a forward position over the lower abdomen of the mother and a left foot was brought down. The hand was reinserted and the deformed lower extremity shown in the illustrations was brought down. By bringing the child further forward over the abdomen of the mother the third foot suddenly popped out of the vagina followed by almost spontaneous delivery of the second portion of the double monster.

Delivery of the monster was completed at 6:40 a. m. The placenta was expelled spontaneously and routine repair of the episiotomy wound performed. The mother was in good condition.

Both sections of the double monster were alive and breathing at delivery. The hearts beating synchronous-



Fig. 3. Detail photograph of the third foot. A dimple on the buttock may be an attempt to form an anus.



Fig. 4. Detail photograph of the external genitalia. Two of the pockets proved to be vaginas and a third presented a bladder exstrophy.

ly. There were feeble attempts at crying. The first section of the monster delivered by forceps died at 7:00 a. m.; the second portion expired at 7:30 a. m.

Roentgenogram of the monster is shown in Fig. 1.

**Necropsy Findings.** The body is that of a full term thoracopagus twin monster weighing 5.68 Kg. (12½ lb.), in general, well developed and well nourished. The sex cannot be determined from the external genitalia. One normal appearing umbilical cord is attached in the midabdomen and one normal appearing placenta is presented as a separate specimen. The heads, necks, shoulders, the four upper extremities and chests are well developed and grossly normal. The two trunks fuse at the caudal end of the sternum and one abdomen is present. There are three lower extremities, two are grossly normal. The third arises from the buttock area and is bigger than the other two lower limbs (fig. 2). The foot of the third extremity is deformed with eight toes; one of these is much larger than the other seven and is situated between the others arising from the dorsal surface of the foot (fig. 3). There is no sign of external trauma. The left head is slightly molded due to a head presentation at birth. There is some cadaveric lividity over the dependent portions of the body.



Fig. 5. Organs in situ. Ht. Hearts, Lg. Lung, L. Liver.

**Facies.**—Eyes, ears, noses, mouths are all well developed. There is a small amount of fine short hair on the heads. The fontanels are open but not abnormal in size or shape. One head shows evidence of molding occurring at the time of delivery (fig. 2).

**External Genitalia.**—There are several abnormal folds of skin present between the two more symmetrical lower extremities. No anus is identifiable. There are two tracts situated among the folds in the vulvar region which on further dissection prove to be vaginas. In the area where the symphysis pubic normally is there is no palpable bone present and a mucous membrane lined pocket is present which on careful examination shows two minute openings in its base which proved to be ureteral orifices (fig. 4).

The body is opened by means of a Y shaped incision down each anterior chest and down the midabdomen. A moderate amount of subcutaneous fat is present. The

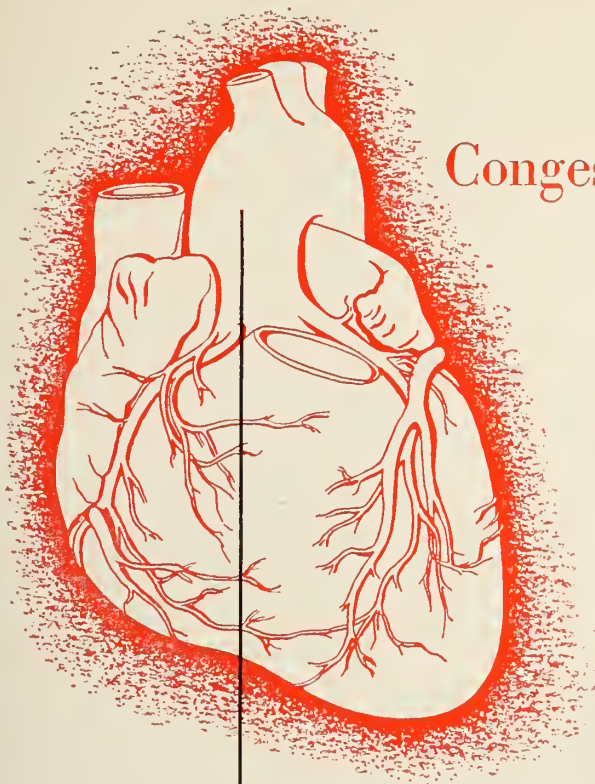


Fig. 6. Thoracic and abdominal organs after removal from their respective cavities. A. Heart and lungs. B. Stomach with attached spleens, pancreas and small bowel. C. Liver (its two gallbladders are not seen). D. Junction of small bowel. E. Large bowel with imperforate anus. F. Vaginal. G. The two uteri with attached adnexal structures. H. Kidney with corresponding adrenal gland.

musculature is well developed and brownish red in color (fig. 5).

**Abdominal Cavity.**—At first glance the abdominal organs seem to be essentially normal in arrangement. The liver is slightly elongated, the stomach is small and hidden by the left costal margin. The spleen is high in the left upper quadrant. There seems to be an excess of collapsed small bowel. The distal portion of the colon is moderately dilated and filled with green colored meconium. On more careful examination two vertebral columns are seen and fuse at the pelvic brim. There is also an incomplete peritoneal fold separating part of the small bowel in the upper abdomen and, on reflecting the liver superiorly and to the left, another stomach, spleen, duodenum and pancreas are visualized





## Congestive Heart Failure...

"The most striking effects were seen in cases of hypertensive heart failure. . . . There is a rapid fall in the raised right auricular pressure with a conspicuous increase in the output of the heart."<sup>1</sup>

SEARLE

# AMINOPHYLLIN<sup>®</sup>

—improves cardiac failure by effecting an improved heart action with increased blood flow, and eliminating edema fluids by the renal route.

Searle Aminophyllin is indicated in paroxysmal dyspnea, bronchial asthma, Cheyne-Stokes respiration and selected cardiac cases.

ORAL—PARENTERAL—RECTAL DOSAGE FORMS



*\*Searle Aminophyllin contains at least 80% of anhydrous theophylline. G. D. Searle & Co., Chicago 80, Illinois.*

SEARLE

RESEARCH IN THE SERVICE OF MEDICINE

<sup>1</sup> Howarth, S.; McMichael, J., and Sharpey-Schafer, E. P.: The Circulatory Action of Theophylline Ethylene Diamine, Clin. Sc. 6:25 (July 17) 1947.

in the right upper quadrant. The peritoneum is glistening and smooth throughout. There is no excess peritoneal fluid present. When all of the abdominal contents are swept out, it is seen that when looked at posteriorly the organs in the upper abdomen are arranged in mirror image to the arrangement when viewed anteriorly.

**Thoracic Cavities.**—The sternum is fused at the ensiform process. On opening both chest cavities the mediastinal organs appear normal in size, shape and arrangement. The thymus glands are essentially normal in size in both chests, each weighing 12 Gm. There are no pleural adhesions and no excess fluid in either chest. The normal complement of lobes are present in all four pleural spaces. The pericardial cavities are not remarkable.

**Thoracic Organs.**—Mediastinal lymph nodes are not appreciably enlarged.

Each heart weighs 73 Gm. The pericardium is smooth. The great vessels are not remarkable. The ductus arteriosus is closed on both sides. Endocardium is smooth and glistening. Valves are grossly not remarkable. Myocardium is reddish brown throughout and the coronary vessels are patent. The foramen ovale are both anatomically open but appear to be functionally closed by a small veil-like membrane.

In the lungs, the pleura is smooth throughout with

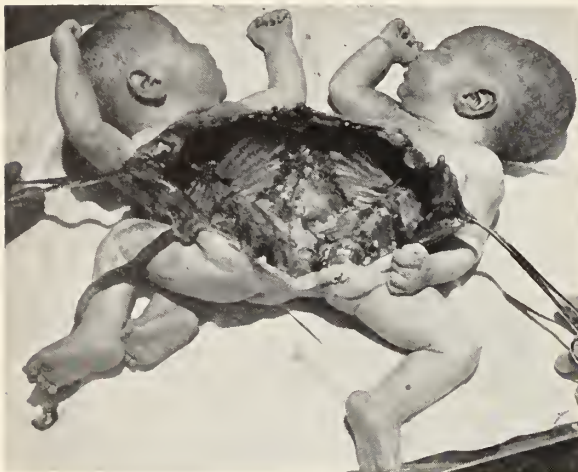


Fig. 7. Thoracic and abdominal cavities after removal of the viscera to show the vertebral columns.

no adhesions present. The bronchi are patent and contain a small amount of frothy secretions. The lungs are air containing and crepitant or subcrepitant throughout. Cut section is not remarkable except for a slight amount of atelectasis in all four lower lobes.

**Abdominal Organs.**—Each spleen measures 5 by 4 by 4 cm. in size. The capsules are slightly wrinkled and bluish red in color. Cut section shows nothing unusual. Gastrointestinal tracts: The esophagi are normal. The two stomachs are both small but are not abnormal in shape. The duodeni are not unusual, and a pancreas is present in the curves of both duodeni. The jejunum present no gross abnormality and the upper portion of the ilei are normal. One hundred and twenty seven cm. from the ileocecal valve the two ilei join and run side by side to within 45 cm. of the ileocecal valve where they fuse into one tube. The remainder of the gastrointestinal tract is one tube. The ileocecal area is normal except for a mesenteric cecum. Only one appendix is present. The colon is slightly distended with mecon-

ium. The rectum is distended and is lost in the peculiar folds in the perineal area; there is no anus. The rectum lies between the two uteri. Figure 6 shows the thoracic and abdominal organs after dissection.

There are two small bowel mesenteries down to the point where the small bowel fuses; two superior mesenteric arteries and celiac axes are present. Only one transverse mesocolon and omentum are present and one sigmoid mesocolon with one inferior mesenteric artery and superior hemorrhoidal artery to the descending colon and rectum; these vessels arise from the aorta which runs along the anterior aspect of the left vertebral column.

The liver is made up of apparently two fused livers, the fusion being at the site of the diaphragm attachment. There are four lobes identifiable with a gallbladder on the anterior half and a similar arrangement of lobe and gallbladder is present on the posterior half. There is only one fully developed falciform ligament and it extends from the anterior half of the liver to the anterior abdominal wall and umbilicus. Only one set of umbilical vessels and ligament of Teres are present and that extends from the anterior half of the liver to the one umbilicus, umbilical cord and placenta. The biliary tracts are both present.

**Genito-Urinary Apparatus.**—There are four kidneys present, each situated along side of the two vertebral columns in the lumbar areas, both pairs receiving blood from their respective aortas. There are four normal sized adrenal glands present at the upper poles of the kidneys. All four kidneys retain some of their fetal lobulations and have patent ureters. The left pair of ureters end in the ectopic anterior bladder with no identifiable urethra. The ureters from the right pair of kidneys empty into a small posterior urinary bladder. The posterior urinary bladder has no identifiable urethra.

There are two sets of female generative organs. The anterior one is situated between the ectopic anterior bladder and the rectum and the posterior uterus, tubes and ovaries are between the posterior bladder and the rectum. Both vaginas open to the outside. Grossly, the two sets of tubes, ovaries and uteri are not abnormal and appear well developed, the posterior set being slightly smaller than the anterior set.

**Retroperitoneal and Thoracic Tissues.**—There are two spinal columns which fuse at the pelvic brim and associated with these are two aortas and two inferior vena cavae (fig. 7). The aortas fuse just above the sacral promontory and there are two definite common iliac arteries. In addition there is a smaller artery which comes off of the right common iliac which goes to the third leg with its abnormal foot.

Microscopic sections from all organs revealed no notable histopathologic changes.

503 E. High St. 507 E. High St.

#### BIBLIOGRAPHY

1. Mall, F. P.: On the Frequency of Localized Anomalies in Human Embryos and Infants at Birth, *Am. J. Anat.* 22:49, 1917.
2. Adair, F. L.: *Am. J. Obst. & Gynec.* 20:539, 1930.
3. Gunter, J. U.: Cephalothoracopagus Monosymmetros, Report of a Case, *Am. J. Path.* 22:855, 1946.
4. Scammon, R. E.: *Fetal Malformation In*, by Abb. I. A.; *Pediatrics by Various Authors*, W. B. Saunders Co., Philadelphia, 1925, p. 654-682.
5. Keevil, N. L.: Fused Twin Monster, *Brit. J. Obst. & Gynec.* 52:513, 1945.
6. Ballantyne, J. W.: *Antenatal Pathology*, London: Green and Sons, 1904.
7. Marchand, H. S.: *Eulenber's Realencyclopedia*, 1911.
8. Ewing, J.: *Neoplastic Disease*, W. B. Saunders Co., Philadelphia, 1942.
9. Hirst, B. C., and Piersol, G. A.: *Human Monstrosities*, Vol. 1-4, Philadelphia, 1891-1893.
10. Schwalbe, E.: *Die Morphologie der Missbildungen des Menschen und der Thiere*, Jena, 1913.

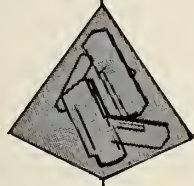
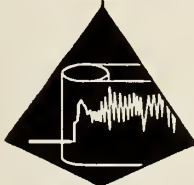




DRINK  
*Coca-Cola*  
TRADE MARK REG.

You trust  
its quality

SANDOZ CHEMICAL RESEARCH HAS DEVELOPED  
MANY NEW MEDICINALS



Following full pharmacological study, substances showing promise of therapeutic value are subjected to extensive clinical investigation.

Representative of the many Sandoz "FIRSTS" IN THERAPEUTICS ARE:

**GYNERGEN**<sup>®</sup> (ergotamine tartrate): specific for migraine headache

**DIGILANID**<sup>®</sup> (lanatosides A, B & C): cardiac glycosides of *D. lanata*

**SCILLAREN**<sup>®</sup> pure cardiac glycosides of squill

**SANDOZ**



Every Sandoz product is uniform in purity  
and potency, assuring dependability of action.

SANDOZ PHARMACEUTICALS  
Division of SANDOZ CHEMICAL WORKS, INC.  
NEW YORK 14, N.Y. • CHICAGO 6, ILL. • SAN FRANCISCO 8, CAL.

Originality • Elegance • Perfection

## HOARSENESS

G. O'NEIL PROUD, M.D., *St. Louis*

THE PRACTITIONER should be ever mindful that hoarseness is not a disease but a symptom of some basic laryngeal change. Such a change may be of no danger to the patient but, all too often, the physician, after temporizing with a case of persistent hoarseness, may find at length that his patient is failing rapidly from inoperable carcinoma. Most cases of acute laryngitis respond quickly on a regimen of voice rest and supportive therapy but, if resolution is not apparent after two weeks of such treatment, one must realize that a more serious condition may be present. It is with such cases of persistent hoarseness that this article is concerned and, for the sake of simplicity, the various causes of dysphonia are listed below:

1. Functional causes.
  - a. Hysterical aphonia.
  - b. Spurious aphonia.
2. Neoplastic.
  - a. Singer's node.
  - b. Papilloma.
  - c. Polyp.
  - d. Varix.
  - e. Hyperkeratosis.
  - f. Carcinoma.
3. Inflammatory.
  - a. Tuberculosis.
  - b. Syphilis.
  - c. Diphtheria.
4. Neurologic.
  - a. Recurrent laryngeal paralysis: (1) central, (2) peripheral.

### FUNCTIONAL CAUSES

Hysterical aphonia is characterized by bouts of hoarseness which suddenly appear, persist for a time, leave and return. Surprisingly enough the patient frequently can phonate for the examiner while the mirror is in place but cannot speak above a whisper while engaging in conversation. Examination of the larynx reveals no abnormality. Such a patient is better off in the hands of a psychiatrist for improper management or abrupt relief of the aphonia may cause a more distressing manifestation of hysteria to appear.

Spurious aphonia manifests itself by distortion of the voice. It may be pitched abnormally high or may be husky or "adolescent" in type. These patients often employ their false cords in phonation or speak with too much muscular tension in the larynx. They may be helped by reeducation of the voice.

### NEOPLASTIC

A singer's node is a small smooth mass which is prone to occur on the true vocal cord at the junct-

tion of its anterior with its middle third. It is benign and usually bilateral. Such nodes often disappear on voice rest and reeducation. If not, they may be removed surgically.

Papillomata of the larynx may occur at any point within the voice box and, at times, become transplanted into the trachea. They are premalignant, prone to recur after removal and on occasion become so abundant that respiration becomes embarrassed.

Laryngeal polyps are rare and may cause transient hoarseness when they fall between the cords while the voice may remain remarkably clear when the polyps lie above the vocal cords.

Laryngeal varix is equally rare and may be so small that dysphonia is not apparent.

Hyperkeratosis of the larynx is premalignant and malignant degeneration may be prevented by its early removal. It may occur as a small hyperkeratotic patch or may completely cover both cords.

Carcinoma usually attacks the anterior third of one or both cords and is curable if attacked early enough because cancer of the larynx metastasizes late. If unilateral a simple laryngofissure may be sufficient to save the patient but when both cords are involved laryngectomy becomes mandatory and the patient suffers the stigma of an ever present tracheotomy tube and esophageal voice if he is clever enough to develop one. Still later, when nodes appear in the cervical region, neck dissection and laryngectomy both must be done and even then chances for a cure are remote. In short, only laryngeal cancer cases which are diagnosed early and receive prompt surgical therapy have a chance for anything other than a miserable lingering course with death as an eventual certainty. Irradiation therapy still meets with failure in nearly every case.

### INFLAMMATORY

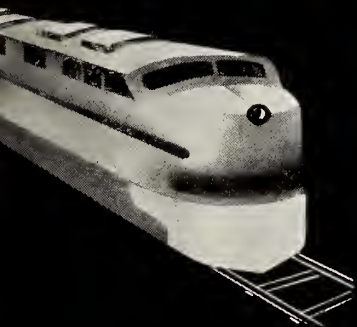
Tuberculosis of the larynx rarely occurs in the absence of pronounced tuberculosis of the lung. It strikes, as a rule, in the posterior half of the larynx and on the epiglottis. Its treatment resolves itself into the treatment of generalized pulmonary tuberculosis.

Syphilis may strike any portion of the larynx. In fact, any of the chronic granulomata may do so and each may resemble the other so closely that differential diagnosis is impossible on the basis of visual examination alone. For this reason a chest roentgen ray, serologic test and biopsy must be done in every instance when a granulomatous mass is found in the larynx.

Diphtheria membranes have become familiar to the average practitioner and, when seen, smear and culture for the Klebs-Loeffler bacillus must

From the Department of Otolaryngology, Washington University School of Medicine, St. Louis.





the difference  
is noteworthy  
**Trimeton**

(brand of prophenpyridamine)

TRIMETON\* differs from most other antihistaminic agents in not being a derivative of ethanolamine or ethylenediamine. This difference is noteworthy and is responsible for the gratifying clinical results obtained. In one study of 227 patients with various allergic conditions<sup>1</sup>

**83% obtained benefit from Trimeton**

Side effects, common to all antihistaminics, occur with TRIMETON, but only a few patients find that they cannot tolerate the drug.<sup>1</sup>

Relief from allergic symptoms is usually obtained with one TRIMETON 25 mg. tablet three times daily; in some patients half this dosage is sufficient. The action of TRIMETON lasts from four to six hours.<sup>2</sup>

**PACKAGING:** TRIMETON (1-phenyl-1-(2-pyridyl)-3-dimethylaminopropane) is available in 25 mg. tablets, scored, in bottles of 100 and 1000.

**BIBLIOGRAPHY:** 1. Brown, E. A.: Ann. Allergy 6:393, 1948. 2. Wittich, F. W.: Ann. Allergy 6:497, 1948.

\*TRIMETON trade-mark of Schering Corporation

**SCHERING CORPORATION • BLOOMFIELD, NEW JERSEY**  
IN CANADA, SCHERING CORPORATION LIMITED, MONTREAL

*Schering*

TRIMETON



be done and antitoxin administered at once. Later, active immunization must be carried out.

#### NEUROLOGIC

Recurrent laryngeal paralysis may be caused by a central lesion but is more frequently due to a peripheral disturbance in the course of the nerve. In thyroidectomy the nerve is, on occasion, damaged by the surgeon and when the patient awakens he is hoarse. If both nerves are cut the cords may move into complete adduction making respiration impossible and tracheotomy becomes an emergency procedure. It is well for the thyroid surgeon to demand preoperative and postoperative examination of the larynx when thyroidectomy is considered.

The nerve also may be damaged by disease in the chest such as carcinoma of the apex of the lung or aortic aneurysm. Some cases are transient and resolve in time while others persist even though no cause is found even after meticulous examination.

From the foregoing discussion it is apparent that the causes of dysphonia are manifold and every patient exhibiting persistent hoarseness must have a painstaking examination of the larynx. Serologic check, chest radiography and biopsy must be resorted to as diagnostic measures whenever a mass is found, and early treatment must be instituted. Failure to do this may jeopardize the patient's life for every case of hoarseness is not "just laryngitis."

640 S. Kingshighway.

## WHAT ARE THE COMMON TYPES OF CANCER?

E. LAWRENCE KEYES, M.D., *St. Louis*

AND

WALLACE RINDSKOPF, JR., M.D., *St. Louis*

WHAT ARE the common types of cancer? A partial answer to the question may be given as follows.

#### A. Cancer in the Living<sup>1</sup>

Indigents admitted to Barnard Hospital or Clinic, 1930 to 1942

1. Skin, 4,476, and melanoma, 148	4,624
2. Lower lip, 1,190; mouth, 902; pharynx and larynx, 286	2,378
3. Cervix, 1,740, and uterus, 170	1,910
4. Breast	1,713
5. Rectum, 381, and colon, 62	443
6. Neck, metastatic	342
7. Stomach	150

#### B. Cancer in the Living and the Dying<sup>2</sup>

Living and new patients, and patients dying, State of New York, 1942

1. Skin	6,203
2. Breast	5,639
3. Uterus and Cervix	4,498
4. "Intestines," 1,723; rectum and anus, 1,691	3,414
5. Stomach	1,798
6. Lip, 1,088; tongue and mouth, 620	1,708
7. Prostate	1,314

The figures represent the State of New York only, exclusive of the City of New York.

#### C. Cancer in the Dying<sup>3</sup>

Indigents dying in St. Louis City Hospital, 1940 to 1946

From the Department of Surgery, St. Louis University School of Medicine, aided in part by a grant from the National Cancer Institute, United States Public Health Service.

From the Barnard Free Skin and Cancer Hospital, and from the Snodgrass Laboratory, St. Louis City Hospital.

1. Colon, 97; rectum, 46; anus, 3	146
2. Primary carcinoma of the lung	101
3. Stomach	80
4. Cervix, 50; and uterus, 15	65
5. Prostate	62
6. Bladder, 35; kidney, 26; ureter, 1	62
7. Pharynx, 17; mouth, 15; larynx, 14; tongue, 9; lip, 3	58

#### COMMENT

1. Skin cancer seems the commonest cancer, at least in the living. This would seem true in the State of Missouri and in the State of New York.

2. Breast cancer might be considered the second commonest cancer in the living.

3. Cancer of the cervix or of the uterus might be called the third commonest cancer.

4. Cancer of the colon or of the rectum seems exceedingly common. In all three lists, it is more common than cancer of the stomach.

5. Cancer of the prostate is common, as is cancer of the lower lip, mouth, pharynx and larynx.

6. It is unusual to find, among indigent residents of the City of St. Louis, primary carcinoma of the lung so prevalent. It ranks second on list C.

7. Cancer of the bladder, kidney or ureter likewise seems common, at least among indigent residents of the City of St. Louis (list C).

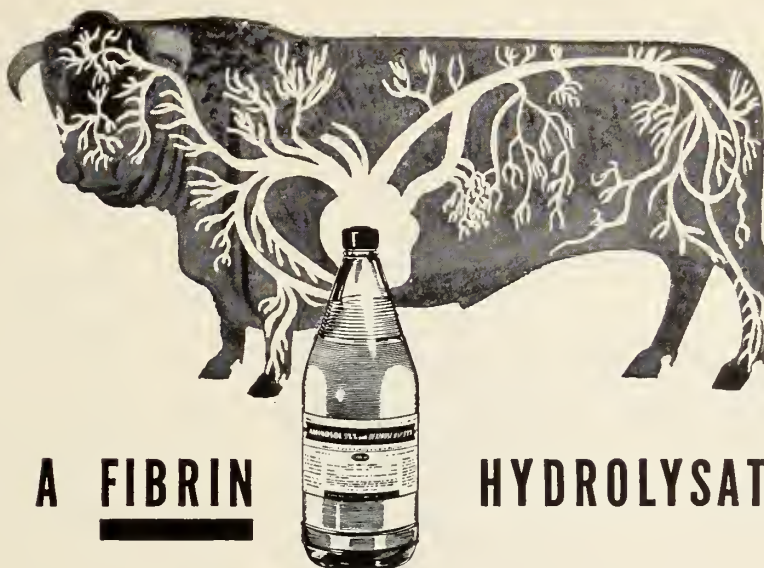
4952 Maryland Ave.

1. Figures compiled from January 2, 1930, to May 12, 1947, by Miss Bessie Taylor.

2. Levin, M. L.: *Bull. Am. Soc. Cont. Cancer*. 26:64-68 (June) 1944.

3. Necropsies among indigent residents of the City of St. Louis; 989 cancers found among 5,000 consecutive necropsies; primary sites only listed. From August 1, 1940, to May 15, 1946.





## WHY A FIBRIN

## HYDROLYSATE ?

AMINOSOL 5% with Dextrose 5% was developed as a protein hydrolysate after much research work on different source materials. Numerous nutrition experiments pointed to the unique role of fibrinogen as a normal constituent of the body. A recent clinical investigation<sup>1</sup> indicates that peptides in a protein hydrolysate derived from fibrin as a source material are retained better and are excreted to a considerably smaller extent than are the peptides derived from other protein source materials.

Fibrin was selected as the source for AMINOSOL because of its completeness as a food protein. The result is a hydrolysate which, after stringent animal and human use, has been shown to have high biological value and stability. AMINOSOL is assayed for the absence of anaphylactic properties by a very rigid procedure. Freedom from pyrogens is assured. The practical absence of sodium ion recommends it for use in cardiac and renal conditions where a salt-free diet is indicated.

AMINOSOL is supplied in 500-cc. and 1000-cc. Abbott Intravenous Solution Containers, ready to use. Obtain added safety and convenience in administration by using the sterile, disposable VENOPAK\* equipment. ABBOTT LABORATORIES, NORTH CHICAGO, ILLINOIS.

*\*Trade Mark for Abbott's completely disposable venoclysis unit.*

# AMINOSOL<sup>®</sup> 5% WITH DEXTROSE 5%

(Abbott's Modified Fibrin Hydrolysate 5% with Dextrose 5%)

1. Christensen, H. N., Lynch E. L., Decker, D. G., and Powers, J. H. (1947), The Conjugated, Non-Protein, Amino Acids of Plasma.

IV. A Difference in the Utilization of the Peptides of Hydrolysates of Fibrin and Casein, J. Clin. Invest., 26:849, September.

## PRESIDENT'S PAGE

In 1950, the Missouri State Medical Association will be 100 years old. Considerable discussion took place in the recent House of Delegates meeting re-



garding this fact and the Association office soon will begin to make plans to celebrate this occasion.

The Committees on Scientific Work and Postgraduate Course will soon arrange the scientific program for the centennial meeting. The Committees will welcome suggestions as to the type of program members desire.

The meeting will take place March 26 to 29, 1950, Hotel Jefferson, St. Louis.

*Wallis Smith.*



# THE JOURNAL

of the

Missouri State Medical Association

623 Missouri Bldg. Telephone: Newstead 0404-05

Subscription . . . \$3.00 a year in advance

*Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent.*

MAY, 1949

## EDITORIALS

### W. A. BLOOM, M.D., PRESIDENT-ELECT

William Anderson Bloom, M.D., Fayette, was elected President-Elect of the Missouri State Medical Association at the 91st Annual Session held in Kansas City, March 27 to 30. He will serve as President-Elect until the next Annual Session when he will be installed as President.

Dr. Bloom brings to his office experience and ability in Association activities. He became a member of the Association when he began practice in Missouri in 1926. He served as delegate at the Annual Session in 1935 and 1937 and became a Vice President of the Association in 1937. In 1938 he was elected Councilor from the Fifth District and served in that capacity until 1946, being Chairman of the Council from 1943. In 1946 he was elected Secretary of the Association, which position he resigned upon being elected President-Elect. He was Chairman of the Council at the time Missouri Medical Service was incorporated and was active in its inauguration and has served on the Board of Trustees and the Executive Committee of Missouri Medical Service continuously.

Born in Wesson, Mississippi, on May 20, 1898, he spent his early life and attended high school in Brookhaven, Mississippi. His parents, Samuel Pierce Bloom, a druggist, and Lulla May Butler, were both native Mississippians. His mother, now 87, lives in a small modern home recently built on the old home place.

Dr. Bloom served in the Navy in the first World War, mostly in foreign service. He received both his B.S. and M.D. degrees from Ohio State University, serving as an extern in the Columbus State Hospital during his last year in medicine. He served a general internship in Kansas City General Hospital and took postgraduate work in anatomy at the University of Missouri School of Medicine.

In 1926 he became part owner and manager of Lee Hospital in Fayette, with W. J. Shaw, M.D., who also had interned at Kansas City General Hospital. M. P. Leech, M.D., and Francis D. Dean, M.D., are now also associated in the thirty-two bed hospital.

He married Frances McMurry, daughter of the

late Bishop William F. McMurry and former president of Central College. They have three children, Jean Clay, now in Ward Belmont College, Mary Byrd and William Anderson, Jr.

Dr. Bloom is a staff physician of Central College, M. K. & T. surgeon, coroner of Howard County, city health officer, president of the Fayette Building & Loan Company, and vice president of the



W. A. BLOOM, M.D.

Fayette school system. He is a member of the Board of Directors of the Missouri State Chamber of Commerce. He is a Fellow of the American Medical Association and the American College of Surgeons.

The House of Delegates has chosen a man interested and able in Association work for its President-Elect during the present year and President in the year to follow.

### A. M. A. SESSION OPEN TO ALL MEMBERS

Attendance at the general, scientific and other meetings of the Atlantic City session of the American Medical Association, June 6 to 10, will be open to all members of the Association. Such attendance has been restricted to Fellows of the Association in the past. Only Fellows, however, may take part in any of the official proceedings.

## NINETY-FIRST ANNUAL SESSION

The Ninety-first Annual Session closed with the final session of the House of Delegates at which Wallis Smith, M.D., Springfield, officially was installed as President of the Association.

Officers elected by the House of Delegates and the Council are: President-Elect, W. A. Bloom, M.D., Fayette; Vice Presidents, J. C. Creech, M.D., Troy, E. J. McIntire, M.D., Carthage, and H. M. Henrickson, M.D., Poplar Bluff; Treasurer, C. E. Hyndman, M.D., St. Louis; Secretary, H. E. Petersen, M.D., St. Joseph; Editor, R. O. Muether, M.D., St. Louis; Delegates to the American Medical Association, R. E. Schlueter, M.D., St. Louis, and James R. McVay, M.D., Kansas City, with F. G. Pernoud, M.D., St. Louis, and R. B. Wray, M.D., Nevada, alternates.

At the Annual Banquet in Honor of Past Presidents, a lapel button commemorating fifty years in the practice of medicine was presented to R. E. Schlueter, M.D., St. Louis, who represented the more than two hundred members of the Association who received the buttons either at the Annual Session or through the mails immediately after the meeting.

Registration at the Session was 941 and an excellent scientific program was well attended throughout the meeting.

Full proceedings of the House of Delegates will appear in the July issue of *THE JOURNAL*.

## NEWS NOTES

Robert E. Schlueter, M.D., St. Louis, was presented with the 1949 award of merit of the St. Louis Medical Society at a meeting in Dr. Schlueter's honor on April 5. Chauncey D. Leake, M.D., Galveston, spoke on "Books Make the Doctor" and R. Emmet Kane, M.D., St. Louis, spoke on "Surgeon—Scholar—Friend."

Lawrence T. Post, M.D., St. Louis, received the Leslie Dana Gold Medal for 1948, a national award given annually for outstanding achievement in the prevention of blindness, at a dinner in St. Louis on March 25.

Delon A. Williams, M.D., Kansas City, spoke before the Kansas City Lions Club on March 28 on "Cancer."

Richard P. Dorris, M. D., Jefferson City, was a speaker on a "Your Health Is You" program of the Business and Professional Women's Club of Jefferson City on March 14.

A. Graham Asher, M.D., Kansas City, was elected president of the Missouri Heart Association at a meeting in Kansas City on March 27.

J. Albert Key, M.D., St. Louis, was elected vice president of the Johns Hopkins Medical and Surgical Association in Baltimore on February 26.

A. Lloyd Stockwell, M.D., Kansas City, spoke before the Independence Business and Professional Women's Club on February 28 on "Socialized Medicine."

Ray McCarthy, St. Louis, has been reelected chairman of the Hospital Advisory Council which was reappointed by Governor Smith.

Theodore A. Coffin, M.D., Kansas City, spoke before the Kansas Association of Practical Nurses on March 1 on "Compulsory Sickness Insurance."

Herbert J. Rinkel, M.D., Kansas City, addressed the American College of Allergists in Chicago on "Using Skin Tests with Serial Dillution as a Guide in the Treatment of Hay Fever and Asthma." Dr. Rinkel also spoke at the Midwinter Postgraduate Clinic of the Colorado State Medical Society in Denver on March 1.

Claude J. Hunt, M.D., Kansas City, spoke before the Breckenridge Rotary Club on March 8 on "Organic Diseases of the Gastrointestinal Tract."

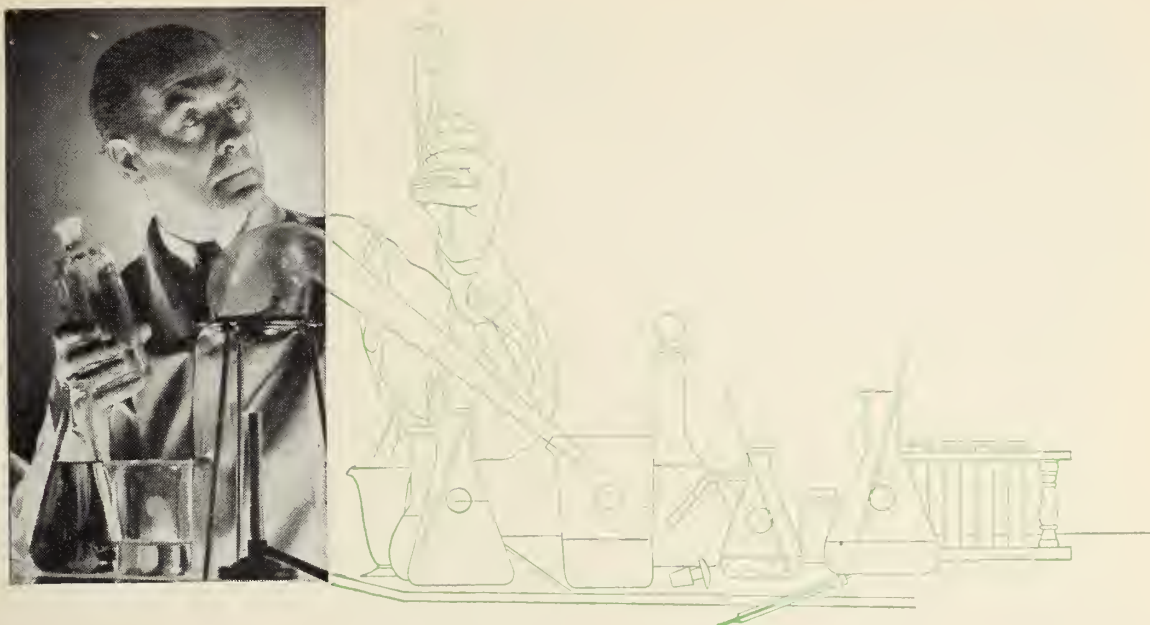
The following members were elected officers for the year 1949-1950 of the University of Missouri Medical School Alumni: C. P. Dyer, M.D., St. Louis, president; Hubert Parker, M.D., Kansas City, H. H. Schmidt, M.D., Marthasville, and W. P. McDonald, M.D., St. Joseph, vice presidents; M. D. Overholser, M.D., Columbia, secretary-treasurer; John S. Knight, M.D., Kansas City, member, general alumni board.

C. Stewart Gilmore, M.D., Kansas City, was a guest speaker before the Grandview Chamber of Commerce on March 14 and spoke on "Is Compulsory Sickness Insurance Necessary?"

Arthur B. Smith, M.D., Kansas City, spoke at a luncheon meeting of the Kansas City Junior Chamber of Commerce on March 17 on "Cancer, Its Prevention, Early Diagnosis and Treatment."

J. W. Thompson, M.D., St. Louis, spoke on "Medicine" at a career conference for boys sponsored jointly by St. Mary's High School and the Kiwanis Club of South Side, held at St. Mary's High School, St. Louis, on April 7.





# Dorsey

**REFINING THE TOOLS TO DO THE JOB**

While medical men are occupied with enlarging their knowledge of disease and treating its manifestations, the makers of ethical drugs concentrate on developing and improving the "tools" to facilitate treatment.

Toward that end, the Smith-Dorsey Company has expanded its research facilities, secured increased research grants and added research personnel.

Our objective — tools worthy of *the finest workman* . . .

**THE SMITH-DORSEY COMPANY • Lincoln, Nebraska**

**BRANCHES AT LOS ANGELES AND DALLAS**



**MANUFACTURERS OF  
AQUEOUS SUSPENSION OF ESTROGENIC SUBSTANCES • DORSEY  
AMINOPHYLLINE SUPPOSITORIES • DORSEY**

## MUSINGS OF THE FIELD SECRETARY

The pleasures and problems of rural medical practice were uncovered before a dinner meeting of interns and residents of Kansas City hospitals on the evening of March 15 held at General Hospital No. 1. The occasion represented another endeavor of the Committee on Rural Medical Service of the Missouri State Medical Association, ably assisted by the Jackson County Medical Society, to acquaint young physicians in training with what it is like to practice medicine in a rural community. This picture was portrayed through the vivid descriptions of four rural physicians who answered questions and discussed their own particular experiences in rural practice. Members of the panel were Dr. Glenn Hendren, Liberty; Dr. A. E. Spelman, Smithville; Dr. O. B. Barger, Harrisonville, and Dr. F. A. Santner, Lathrop. Dr. C. Edgar Virden, Kansas City, served as moderator for the discussion.

The contract for the Dunklin County hospital to be located at Kennett has been let and construction is expected to start immediately.

Contracts for construction of the Pemiscot County hospital at Hayti and the Phelps County hospital at Rolla are expected to be let in the near future.

Increasing numbers of requests from various organizations and clubs for speakers on "National Compulsory Health Insurance" are coming in to the Association's Committee on Health and Public Instruction. The Committee is making every effort with the fine cooperation of many physicians all over the state to fulfill these important requests. It does not take an M. A. in public speaking to present the obnoxious features of socialized medicine, so-called compulsory health insurance, in an acceptable manner.

## DEATHS

**Pinion, John R., M.D.**, Caruthersville, a graduate of the University of Missouri School of Medicine, 1909; member and former president of the Pemiscot County Medical Society; aged 61; died January 12.

**Welff, Charles, M.D.**, Maplewood, a graduate of St. Louis University School of Medicine, 1924; member of the St. Louis County Medical Society; Fellow of the American Medical Association; aged 55; died February 27.

**Green, John, M.D.**, St. Louis, a graduate of Washington University School of Medicine, 1898; member of the St. Louis Medical Society; Fellow of the American Medical Association; past president of the American Ophthalmological Society and the Ophthalmological Society of St. Louis; aged 75; died April 7.

## ORGANIZATION ACTIVITIES

### THE COUNCIL

The Council met at Hotel President, Kansas City, March 27, with J. W. Thompson, St. Louis, Chairman, presiding. Those present were H. E. Petersen, St. Joseph; J. W. Thompson, St. Louis; Otto W. Koch, Clay-

ton; J. F. Jolley, Mexico; R. W. Kennedy, Marshall; C. Edgar Virden, Kansas City; W. S. Sewell, Springfield; E. C. Bohrer, West Plains; Frank W. Hall, Cape Girardeau; Robert Mueller, St. Louis; Wallis Smith, Springfield; W. A. Bloom, Fayette; R. E. Schlueter, St. Louis; W. L. Allee, Eldon; James R. McVay, Kansas City; Howard B. Goodrich, Hannibal; Mr. Lemoine Skinner, Mr. T. R. O'Brien, and Mr. Ray McIntyre, St. Louis.

Dr. Virden stated that the entertainment to be provided by the Jackson County Medical Society was running \$200.00 more than anticipated and, upon motion, it was voted to allot \$200.00 more to the Society.

It was reported that 1,540 members had paid the assessment of the A. M. A.; that twenty-seven had paid directly to the A. M. A. and that forty-three had asked to be relieved from paying because of illness or similar circumstances. Lists by counties of the numbers of members having paid were given each Councillor.

The following resolution was adopted, upon presentation by the Chairman, and voted to be presented to the House of Delegates:

WHEREAS, There has been for several years a constantly growing threat to the voluntary method of rendering medical care to the people of the United States, and

WHEREAS, The people of the United States and the medical profession rightfully look to the American Medical Association for leadership in matters pertaining to medical care and the welfare of both the people and the profession, and

WHEREAS, The American Medical Association has, by action of its House of Delegates at the Interim Session, launched a campaign to educate the public concerning medical care, and

WHEREAS, This program involves the support of individual physicians both in spirit and financially as to the assessment of \$25.00 placed on each member, therefore be it

*Resolved*, That the House of Delegates of the Missouri State Medical Association heartily endorses the program of the American Medical Association and offers its support both in spirit and in urging members to comply with the assessment, and be it further

*Resolved*, That a copy of this resolution be sent to the Board of Trustees of the American Medical Association, the Speaker of its House of Delegates, members of its House of Delegates, Chairman of its Coordinating Committee, and to all Missouri members of the United States Congress.

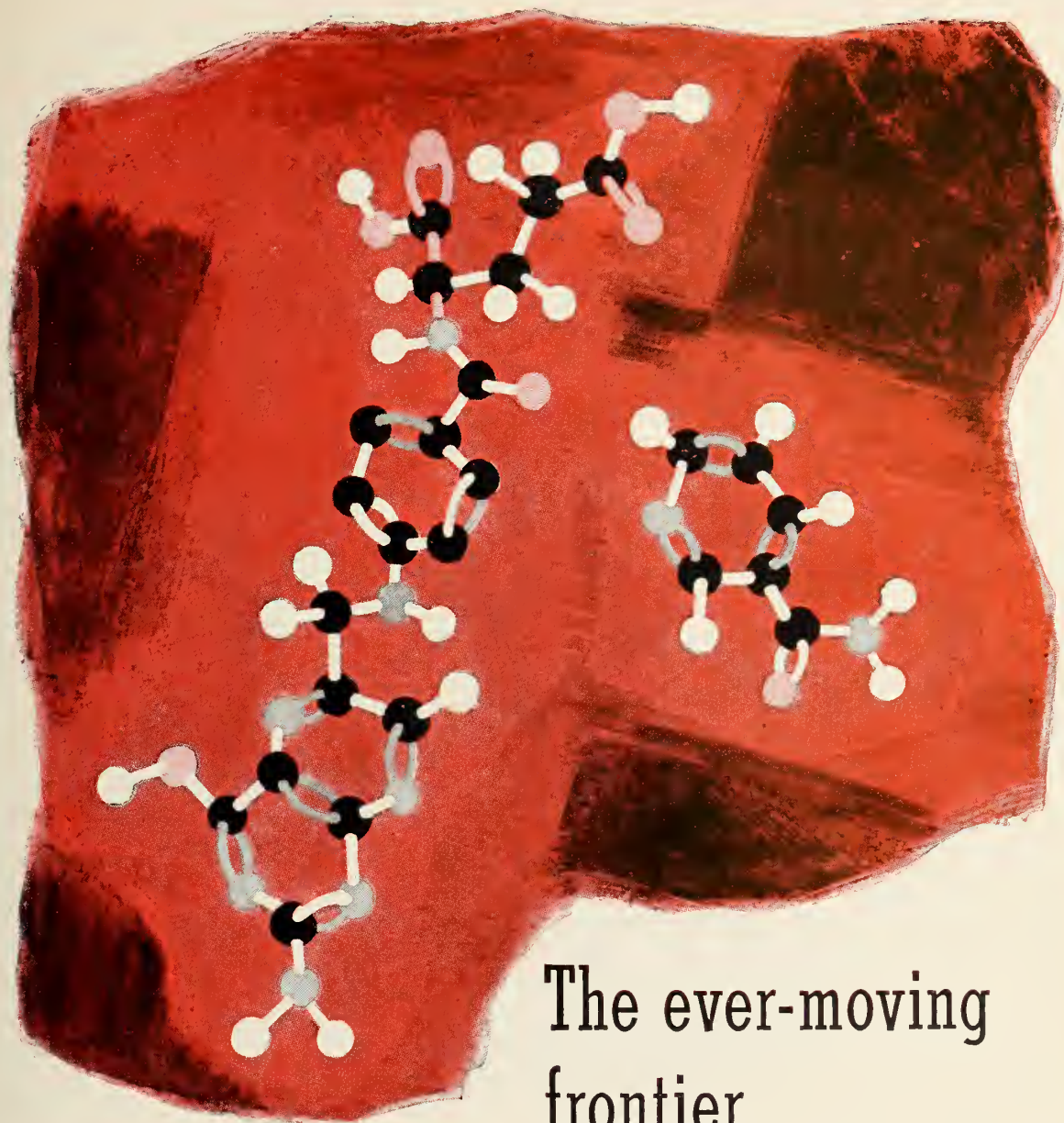
The following recommendations of the Council to the House of Delegates were approved as follows:

The A. M. A. on February 11, 1949, officially adopted a twelve point program. This program was then presented to representatives of all state medical associations. It is a good program and all state and county medical societies are expected to implement it.

The Missouri State Medical Association has gone on record in the past and the Council urges the House of Delegates to reaffirm its stated policy of doing everything possible to furnish the best medical care possible to all the people of Missouri. At the same time, the Council urges the House of Delegates to approve officially the twelve point program and to advise our representatives in Congress of this action.

The following projects have been continuing projects of the Association for many years. The Council wishes at this time to call attention to them and to the work of the committee involved.





## The ever-moving frontier

Research on vitamin knowledge in the field of nutrition has come a long way since the early published researches of McCollum, Mendel and Funk. The science of nutrition is no longer the stepchild of medicine, nor the poor relation of agriculture. In particular, our understanding of the need for vitamins in human nutrition has enormously increased. Vitamins constitute in the aggregate the *sine qua non* for cellular respiration, reproduction, growth and repair.

For the past 25 years, biochemists have pressed forward a continually moving frontier of scientific discovery in the field of nutrition. In recent years, *Lederle* has been in the vanguard of this movement, its investigators being well known for their achievements with folic acid, pyridoxine, biotin, the pantothenates, liver extract, and allied substances. There will be no slackening in the efforts of this organization to uncover additional aids to better health and better living.

**LEDERLE LABORATORIES DIVISION** *AMERICAN Cyanamid COMPANY*  
30 ROCKEFELLER PLAZA • NEW YORK 20, N. Y.

### Voluntary Insurance

The Blue Cross (hospitalization) and Blue Shield (medical-surgical care) plans in Missouri have been in existence since 1935. The report of the Committee on Medical Economics, published in the Reports of Officers and Committees, indicates the extent of the enrollment in these plans. The Council urges the House of Delegates to inform the management of the plans in Missouri that we are squarely behind them and that the members of the Missouri State Medical Association will do everything possible to assist them in enrolling more persons in our state.

### New Facilities

The Council of your state medical association is aware of the lack of facilities especially hospitals and health centers in Missouri. It strongly urges that the people of Missouri at the local level avail themselves of the federal grants under the terms of the national Hill-Burton Act. Progress is being made in this shortage. The report of your Committee on Rural Medical Service indicates the extent of the construction program in this field which is already underway.

### Public Health

For many years this Association has supported the activities of the state and local health departments. These departments need additional funds to carry out their educational and disease control program. Your Council respectfully urges the House of Delegates to go on record as favoring public health work in this state in cooperation with the Missouri State Medical Association.

### Mental Hygiene

Your State Association has supported actively the Governor and the legislature of our state in various suggested programs to improve mental health. At the present time a special committee appointed by the president is investigating the mental hospitals at the request of Governor Forrest Smith. Additional information will be found in the report of the Committee on Mental Health.

### Health Education

The Committee on Health and Public Instruction have been providing speakers on health educational subjects for several years. Your Council respectfully urges that the work of this Committee continue at an accelerated rate so that the people may be informed of the available facilities and of their own responsibilities in health care.

### Industrial Medicine

Your Committee on Industrial Health has been working on a most important project for several years. This project—to have the medical schools in our state teach industrial health as part of the regular curriculum—will begin at St. Louis and Washington universities in October 1949. The report of this Committee gives further details.

### Rural Medical Service

Since the end of the war the Association has under the direction of the Committee on Rural Medical Service provided a Bureau of Information. This Bureau has endeavored to assist in helping doctors find suitable location in our state as well as act as a clearing house for communities which write to find medical personnel for them. Two hundred ninety-one physicians have

located in various places in rural Missouri since the end of the war. Further information will be found in the report of the Committee on Rural Medical Service.

Mr. Lemoine Skinner made a detailed report on research work he had done on medical schools. He explained that much of the material he presented had been opened to him in confidence and that the material should be held as strictly confidential by the Council for the present. It was agreed that no report be made of the material presented and no action by the Council be made official for the present. It was voted to report to the House of Delegates that work was progressing.

### Meeting of March 28

The Council met at Hotel President, Kansas City, on March 28, with J. W. Thompson, St. Louis, Chairman, presiding. Those present were H. E. Petersen, St. Joseph; W. F. Francka, Hannibal; J. W. Thompson, St. Louis; Otto W. Koch, Clayton; J. F. Jolley, Mexico; R. W. Kennedy, Marshall; C. Edgar Virden, Kansas City; W. S. Sewell, Springfield; E. C. Bohrer, West Plains; Frank W. Hall, Cape Girardeau; Wallis Smith, Springfield; W. A. Bloom, Fayette; R. E. Schlueter, St. Louis; Howard B. Goodrich, Hannibal; James R. McVay, Kansas City; Paul Baldwin, Kennett; Ray McIntyre, St. Louis; T. R. O'Brien, St. Louis.

Upon the request of Mrs. August Werner, St. Louis, incoming president of the Auxiliary, the following Advisory Committee was appointed: Robert Mueller, St. Louis; M. Pinson Neal, Columbia; A. N. Altringer, Kansas City.

A letter from the A. M. A. Manpower Commission was read pointing out that drafting of physicians would take place unless there were more enlistments from the group of physicians who were trained at government expense. It was voted that a letter be sent to each society secretary regarding this and that copies of the letter go to each physician in this category.

Mr. O'Brien read a resolution opposing federalized medicine which the Missouri Hospital Association passed. It was pointed out that the A. M. A. had asked that county societies pass, and get other organizations to pass, similar resolutions.

Mr. O'Brien read a letter from the Department of Aid to Dependent Children pointing out the difficulty in obtaining clear data on disability. The possibility of using physicians in adjoining counties so that pressure could not be used on local physicians, as in the Veterans Administration, was discussed. Mr. O'Brien was asked to continue study of the situation and attempt to work out a plan that would assist the department.

Upon motion the President was asked to write the Kansas City Star thanking them for their cooperation.

After discussion, it was voted that the Association office should establish a lending library of slides to be used by physicians in talks on federalized medicine.

### Meeting of March 30

The Council met at the Municipal Auditorium, Kansas City, on March 30, with E. C. Bohrer, West Plains, Vice Chairman, presiding. Those present were Donald M. Dowell, Chillicothe; W. F. Francka, Hannibal; J. W. Thompson, St. Louis; Otto W. Koch, Clayton; J. F. Jolley, Mexico; R. W. Kennedy, Marshall; C. Edgar Virden, Kansas City; W. S. Sewell, Springfield; E. C. Bohrer, West Plains; Frank W. Hall, Cape Girardeau; Wallis Smith, Springfield; W. A. Bloom, Fayette; Robert Mueller, St. Louis.

The following officers were elected: J. W. Thompson,



# in HAY FEVER

Three major qualities  
distinguish

## Neo-Antergan<sup>®</sup>

MALEATE

(Brand of Pyranisamine Maleate)

(N-p-methoxybenzyl-N',N'-dimethyl-N-α-pyridylethylenediamine maleate)



Your local pharmacy stocks Neo-Antergan in 25-mg. and 50-mg. tablets, supplied in boxes of 100 and bottles of 1,000.

**1. EFFICACY** Neo-Antergan has provided complete or appreciable symptomatic relief in 71 per cent of an accumulated series of more than 500 cases of hay fever.

**2. WIDE THERAPEUTIC RANGE** Neo-Antergan has proved effective in relieving allergic symptoms in certain patients who had failed to respond to other therapeutic measures.

**3. SAFETY** It was necessary to discontinue Neo-Antergan therapy only in approximately 3.5 per cent of a series of over 1,500 patients because of untoward side effects.



MERCK & CO., Inc. *Manufacturing Chemists* RAHWAY, N. J.

St. Louis, Chairman of the Council; E. C. Bohrer, West Plains, Vice Chairman of the Council; C. E. Hyndman, St. Louis, Treasurer; H. E. Petersen, St. Joseph, Secretary; R. O. Muether, St. Louis, Editor.

Dr. Francka invited the Council to hold its next meeting in Hannibal. The dates of the meeting are May 7 and 8.

The resignation of Dr. Mantz as an alternate delegate to the A. M. A. was presented to the Council. It was decided to wait until the May meeting to appoint someone in his place.

## MISCELLANY

### N. P. C. DISBANDS ORGANIZATION

The following "Official Statement of the Board of Trustees of the National Physicians Committee for the Extension of Medical Service to Officers and Members of Cooperating Organizations—and Contributors to National Physicians Committee" was mailed under the date of April 14, 1949. The statement follows:

"Ten years ago, a group of officers and fellows of the American Medical Association realized that the American Medical Association was not as active in certain functions as was deemed necessary, some of which seemed at that time inappropriate for the American Medical Association to perform. As a result, the National Physicians Committee for the Extension of Medical Service was created and has worked during these intervening years within the policies established by the House of Delegates of the American Medical Association

"Several times during those years, the House of Delegates has expressed confidence in the work of this organization.

"Two years ago, a Committee of the House of Delegates reported that 'The American Medical Association should and must do its own public relations work.'

"In December, 1948, the House of Delegates took action to create a new agency to carry on public relations activities and to further the extension of medical care. This new agency has been created and is functioning. The program as planned and now being carried on by the American Medical Association represents the fulfillment of the objectives for which the National Physicians Committee was created and toward which it has been working.

"Its aims having been accomplished, the Board of Trustees of the National Physicians Committee met in Chicago on April 10, 1949, and voted (1) to approve the action of its Management Committee in authorizing cessation of all activities as of April 1, 1949, and (2) to liquidate the affairs of the National Physicians Committee in an orderly manner.

"It planned further to hold its next meeting in Atlantic City in June 1949 and at that time to consider further action looking toward dissolution of the organization.

"During its ten years of activity, the National Physicians Committee has brought about the formation of forty-seven state committees of physicians and forty-six state committees of dentists, in addition to other local organizations, that have functioned vigorously and well. The Board of Trustees now suggests to the physicians making up the personnel of these state committees that they offer their services to the new American Medical Association Agency."

### BLUE SHIELD PLANS

The Associated Medical Care Plans, Chicago, reported recently on various plans and general information on Blue Shield. The information follows:

#### Blue Shield Plans Exceed Ten Million Members in 1948

With a fourth quarter gain of 1,057,274 members, the largest quarterly growth in the history of the prepayment medical care movement, Blue Shield national headquarters announced recently that 1948 enrollment had totalled 10,370,819 persons. The million member gain represented a growth of 11.35 per cent for the fourth quarter of 1948.

Contributing to this phenomenal growth was the enrollment of Ford Motor Company employees, totaling approximately 250,000 persons, the majority of which were enrolled in Michigan Medical Service.

Blue Shield in Michigan continues to be the largest plan in the nation with a December 31 enrollment of 1,311,811, followed closely by Blue Shield in New York City with 1,128,967 persons enrolled.

Although still relatively modest in size, Pennsylvania's Blue Shield Plan experienced one of the most rapid enrollment gains during 1948, increasing its membership 171 per cent for a new total of 353,643.

Blue Shield Plans in Indiana, New Jersey and Kansas City, Missouri, went over the 200,000 member mark during the latter part of 1948.

Delaware still leads all other plans in the percentage of population protected, having enrolled approximately 49 per cent of the state's population. Michigan follows with 21 per cent of the population enrolled.

Blue Shield growth for 1948 showed a 43.39 per cent net gain over 1947, with an addition of 3,138,628 members during the year.

#### Majority of Blue Shield Plans Now Offer Medical Benefits

From a recent survey of benefits provided by Blue Shield Plans throughout the nation it was determined that a majority of plans had added some type of medical benefits to their surgical programs.

Public demand for more comprehensive benefits has resulted in these expanded services. For the most part these medical benefits are restricted to doctors' visits in the hospital for treatment of nonsurgical cases.

In-hospital medical benefits have increased slightly the subscription rates of the plans.

"As long as the risk is insurable, and experimental experience can be gained, Blue Shield Plans will continue to add to the services provided in their membership certificates," predicted Frank E. Smith, director of the Blue Shield Commission. "The only added restrictive influence will be the consumer market and its ability or willingness to absorb increased costs for more comprehensive programs."

#### Average Blue Shield Plan Described

Although Blue Shield plans vary considerably in the scope of benefits offered and the corresponding cost to subscribers, a recent survey conducted by the Blue Shield national office produced, among other things, a description of the average Blue Shield Plan.

Such a plan provides complete surgical and obstetric care including delivery, fractures and dislocations, medical care for hospitalized cases, limited diagnostic x-ray, and anesthesia.

These benefits are provided on a service basis for single subscribers with annual incomes less than \$2,050 and families with incomes less than \$3,100.



If she is one  
of your patients



..Your help now may spell the difference between unprovided-for old age and economic security.

Women in business who are nervous, emotionally unstable and generally distressed by symptoms of the climacteric almost inevitably experience a reduction in efficiency as well as earning power.

"Premarin" offers a solution. Many thousand physicians prescribe this naturally-occurring, oral estrogen because...

1. Prompt symptomatic improvement usually follows therapy.
2. Untoward side-effects are seldom noted.
3. The sense of well-being so frequently reported tends to quickly restore the patient's confidence and normal efficiency.
4. This "Plus" (the sense of well-being enjoyed by the patient) is conducive to a highly satisfactory patient-doctor relationship.
5. Four potencies provide flexibility of dosage: 2.5 mg., 1.25 mg., 0.625 mg. and 0.3 mg. tablets; also in liquid form, 0.625 mg. in each 4 cc. (1 teaspoonful).



While sodium estrone sulfate is the principal estrogen in "Premarin," other equine estrogens...estradiol, equilin, equilenin, hippulin...are probably also present in varying amounts as water-soluble conjugates.

**"PREMARIN"**



ESTROGENIC SUBSTANCES (WATER-SOLUBLE)  
also known as CONJUGATED ESTROGENS (equine)

**Ayerst, McKenna & Harrison Limited** 22 East 40th Street, New York 16, New York

Average subscription costs are \$1.17 per month for the single subscriber, \$2.26 for a man and wife, and \$2.75 for the family.

Most comprehensive in benefits offered and also highest in cost to the subscriber is the program offered by Oregon Physicians' Service, which includes home and office visits by the doctor and limited dental services, the family cost running as high as \$8.10 per month.

Least expensive is the surgical certificate offered by United Medical Service in New York City, starting at 40 cents per month for the single subscriber.

#### Service Benefits Expand

Two more Blue Shield Plans, located at Rochester, New York, and Huntington, West Virginia, are considering the inclusion of service features in their contract benefits. Final decisions have not been reached, but both plans have been requested by their sponsoring medical society to study the matter and prepare recommendations.

#### Payroll Deductions Granted for 14,000 TVA Employees

Blue Cross and Blue Shield membership is now being offered to 14,000 employees of the Tennessee Valley Authority in five southern states, with authority granted for payroll deduction in the collection of monthly dues.

Although an independent authority, TVA is a government owned corporation and is classified as a federal agency, establishing announcement of payroll deduction privileges by Harry L. Case, TVA Personnel Director, as a significant precedent in the enrollment of federal employees.

Blue Cross and Blue Shield coverage will be available to TVA employees in Alabama, North Carolina and Mississippi. Blue Cross only will be offered in Tennessee and Kentucky, due to the absence of a Blue Shield Plan in these two states at the present time.

#### South Carolina Prepares New Prepayment Plan

The Council of the South Carolina Medical Association has approved a report of its Medical Service Committee, recommending the establishment of a non-profit prepayment plan similar in type to the sixty Blue Shield Plans now operating in the United States.

Incorporation has been authorized, and a committee is currently preparing a fee schedule and other related medical details. Final approval will be sought at the next annual meeting of the House of Delegates on May 17 to 19.

#### Blue Shield Planning Own Building in Pennsylvania

Blue Shield in Pennsylvania, with its principal office in Harrisburg, expects to occupy a newly constructed building of its own by September 1, 1949.

Because of its rapid expansion during 1948 and the need for additional working space, it became necessary for the plan to find new quarters in Harrisburg in order to handle its growing volume of business. Some months ago it was decided that a new building was the only answer to the problem. Accordingly, property was secured, architect's drawings prepared, and bids sought for actual construction which is expected to be completed by early fall.

#### AMCP Studying Revision of Membership Standards

Revised membership requirements for Blue Shield Plans affiliated with Associated Medical Care Plans are being studied by the Membership Committee, of which A. J. Offerman, M.D., Omaha, is chairman.

Present membership requirements for plans belonging to AMCP are based upon minimum standards established by the Council on Medical Service of the A.M.A. The AMCP Constitution provides, however, that the Blue Shield Commission may impose further standards at any time. It is for the purpose of supplementing the Council on Medical Service standards that the Blue Shield Commission recently instructed its membership committee to prepare a new and considerably strengthened set of membership requirements.

Commenting on the proposed stiffening of Blue Shield standards, Dr. Paul R. Hawley, Chief Executive Officer, said, "Blue Shield is beginning to mean something to this country, and, for the security of all the plans, I think the plans should protect themselves by raising their standards of approval."

#### Blue Shield Plans Asked to Cooperate With AMA National Education Campaign

Blue Shield Plans have been urged to cooperate with the American Medical Association's recently organized National Education Campaign by accelerating their enrollment efforts during 1949.

Appearing before the January meeting of the Blue Shield Commission, Mr. Clem Whitaker and Miss Leone Baxter indicated that enrollment in voluntary plans would comprise a major emphasis in the campaign as it gained momentum.

To explore specific ways in which enrollment in Blue Shield might be boosted during the coming year, staff members from the office of Whitaker and Baxter met on February 13 in Chicago with the Blue Shield national committee on public relations.

Proposals for assistance from Whitaker and Baxter in the preparation of promotional and public relations materials to be used by Blue Shield Plans were approved by the Blue Shield committee and will be presented to the Commission and 1949 Annual Conference of Blue Shield Plans on April 18 to 20 in Hollywood, Florida.

#### MATERNAL MORTALITY

Maternal mortality decreased to a new low in the United States during 1947, according to figures released March 20 by the National Office of Vital Statistics of the Public Health Service, Federal Security Agency. The maternal mortality rate was 1.3 per 1,000 live births in 1947 as compared with 1.6 in 1946. The number of maternal deaths (associated with diseases of pregnancy, childbirth and the puerperium) also decreased from 5,153 deaths in 1946 to 4,978 in 1947 despite the tremendous increase in the number of births.

In 1947, the maternal mortality rate for white women was 1.1 per 1,000 live births, while that for non-white women was 3.3, or three times as great. The risk of dying associated with childbearing has been declining steadily since 1933, the first year in which data are available for the entire continental United States. From 6.2 in 1933, the maternal mortality rate decreased 79 per cent, to the 1.3 in 1947. The maternal mortality rate for the white race decreased 80 per cent, from 5.6 in 1933 to 1.1 in 1947, and the rate for the nonwhite races decreased 66 per cent in this period, from 9.7 to 3.3.

For the individual states the maternal mortality rates in 1947 ranged from 0.6 deaths per 1,000 live births for residents of Minnesota to 2.6 for residents of Alabama, Mississippi and South Carolina. Missouri had a rate of 1.4 for 1947. In 1946 the rate was 1.6 and in 1940 it was 3.8.



## SCHOOL HEALTH QUESTIONNAIRE

The secretary of each local medical society will soon receive in the mail a questionnaire on school health services in his community. The American Medical Association in cooperation with the U. S. Office of Education is making a study of school health services through its Bureau of Health Education. The survey is a preliminary step in efforts designed to bring about improvement of school health programs within the framework of the private practice of medicine. For this reason, it is most important that each local medical society complete and return the questionnaire.

The U. S. Office of Education in Washington will concurrently query the schools. Two different questionnaires, which supplement and reinforce each other and contain no duplicate questions, are being used. The information requested is needed to determine present strengths and weaknesses in school health services, to indicate needs and to point up action for the future. The questionnaire has been tested prior to printing and all unnecessary questions eliminated.

## SOCIETY PROCEEDINGS

### FIRST COUNCILOR DISTRICT

DONALD M. DOWELL, CHILLICOTHE, COUNCILOR  
Caldwell-Livingston County Medical Society

Thirty physicians attended a joint dinner meeting of the Caldwell-Livingston, Carroll, Clinton, Grundy-Daviess, Harrison, Linn, Mercer and Ray county medical societies at the Strand Hotel, Chillicothe, the evening of March 3.

Kenneth E. Cox, M.D., Kansas City, discussed "Office Management of Retroversion."

Robert Mueller, M.D., St. Louis, spoke on "A Challenge to Medicine."

Another meeting of the group is scheduled in the near future under sponsorship of the Grundy-Daviess County Medical Society.

CHARLES M. GRACE, M.D., Secretary.

### SECOND COUNCILOR DISTRICT

W. F. FRANCKA, HANNIBAL, COUNCILOR  
Chariton-Macon-Monroe-Randolph Counties  
Medical Society

The Chariton-Macon-Monroe-Randolph Counties Medical Society held its March meeting on March 10 in Moberly. Fourteen members were present.

T. E. Sanders, M.D., St. Louis, gave an interesting and practical discussion on "Common Eye Conditions."

Following the formal part of the program, a delicious cold lunch was served.

HENRY K. BAKER, M.D., Secretary.

### FOURTH COUNCILOR DISTRICT

OTTO W. KOCH, CLAYTON, COUNCILOR  
St. Louis County Medical Society

The St. Louis County Medical Society met on February 23 at the Health Center, St. Louis County Hospital, at 8:30 p. m.

The minutes of the meeting of February 9 were read and approved.

The following resolution was adopted: Resolved, That the St. Louis County Society instruct its delegates to vote favorably or "yes" on the amendment to the constitution of the Missouri State Medical Association eliminating the word "white."

Upon motion the following resolution was adopted: Resolved, By the St. Louis County Medical Society that we go on record as approving the \$25.00 assessment recently levied by the American Medical Association.

The following resolution was adopted: Resolved, That the St. Louis County Medical Society instruct its delegates to the state meeting to vote contrary to the present proposed form of compulsory government medicine.

Following adjournment, refreshments were served by the entertainment committee of the Woman's Auxiliary.

ROBERT C. KINGSLAND, M.D., Secretary.

### FIFTH COUNCILOR DISTRICT

J. F. JOLLEY, MEXICO, COUNCILOR  
Cole County Medical Society

The Cole County Medical Society met April 5 to honor one of its most revered members. The Society held a testimonial dinner meeting in honor of Dr. F. W. Gillham, Jefferson City, who has completed fifty years in the active practice of medicine. Forty members and guests were present to enjoy an evening of festivities at the Jefferson City County Club and to pay homage to one of Missouri's grand men of medicine.

Dr. Joseph S. Summers, Sr., Jefferson City, a long time friend and medical contemporary of Dr. Gillham related a number of interesting incidents which had happened to them during their close association in the practice of medicine. He stressed particularly the unselfish devotion to the welfare of his patients that Dr. Gillham has always exhibited.

Following introduction of guests and Dr. Summers' remarks, Dr. James R. McVay, Kansas City, Chairman of the Council on Medical Service of the American Medical Association, spoke on "Socialized Medicine and the American Medical Association's Educational Program."

In addition to members of the Cole County Medical Society and a number of Jefferson City nonmedical friends of Dr. Gillham, out of town guests included: A. R. McComas, M.D., Sturgeon; W. J. Stewart, M.D., Columbia; Paul Hines, M.D., St. Louis; Neil S. Moore, M.D., St. Louis; Mr. Harry Mohler, Superintendent, Missouri Pacific Hospital, St. Louis, and Mr. Ray McIntyre, Field Secretary, Missouri State Medical Association.

J. PAUL LESLIE, M.D., Secretary.

### SIXTH COUNCILOR DISTRICT

R. W. KENNEDY, MARSHALL, COUNCILOR  
Pettis County Medical Society

The Pettis County Medical Society met at the Old Missouri Homestead on February 21 for a dinner meeting.

James R. McVay, M.D., Kansas City, spoke on "Present Trends of Current Legislation" in which he pointed out the numerous discrepancies in the text of Mr. Oscar Ewings' report to the President on the state of the nation's health. Dr. McVay suggested that each member of the Society become conversant with the subject in order that he may intelligently give information to patients and others who may inquire.

Members present were Drs. W. A. Beckemeyer, W. E. Bess, J. W. Boger, C. H. Brady, A. J. Campbell, John B. Carlisle, D. P. Dyer, D. R. Edwards, M. P. Shy, C. D. Siegel, C. G. Stauffacher, C. B. Trader, A. L. Walter, Sedalia; H. A. Hite, Green Ridge; E. E. Holtzen and P. V. Siegel, Smithton; Messrs. Dow, Harland and Wolfe, Sedalia, attorneys.

CARL D. SIEGEL, M.D., Secretary.

**NINTH COUNCILOR DISTRICT****E. C. BOHRER, WEST PLAINS, COUNCILOR****South Central Counties Medical Society**

The South Central Counties Medical Society met in Cabool on February 18 for dinner at the El Patio Hotel with the following members and visitors present: Drs. J. R. Mott, Hartville; J. A. Fuson, Mansfield; R. A. Ryan and A. C. Ames, Mountain Grove; Garrett Hogg, Jr., Cabool; T. J. Burns, Houston; E. C. Bohrer, Rollin H. Smith and C. F. Callihan, West Plains; F. T. H'Doubler and A. Denton Vail, Springfield.

Following dinner the meeting was called to order in the office of Dr. Hogg, the president.

The minutes of the last meeting were read and approved.

Dr. H'Doubler gave an instructive talk on "Goiter."

Dr. Vail showed some interesting pictures of malignant growths in the bowel, mostly of the lower bowel.

A vote of thanks was given the speakers.

It was decided to omit a meeting in March and to meet in Cabool on April 15.

A. C. AMES, M.D., Secretary.

**TENTH COUNCILOR DISTRICT****FRANK W. HALL, CAPE GIRARDEAU, COUNCILOR****St. Francois-Iron-Madison-Washington-Reynolds  
County Medical Society**

The St. Francois-Iron-Madison-Washington-Reynolds County Medical Society met March 31 at the State Hospital, Farmington.

Robert J. Mueller, M.D., St. Louis, spoke on "Psychosomatic Medicine."

John P. Yeargain, M.D., Irondale, was elected to honor membership. George Cresswell, M.D., Potosi, was elected to regular membership.

A resolution was passed unanimously opposing compulsory health insurance and endorsing the American Medical Association's ten point plan for improving medical care.

The following members were present: Drs. Van Taylor, Harry Roebber and M. T. Haw, Jr., Bonne Terre; M. Grossman, and W. Harry Barron, Fredericktown; G. L. Watkins, G. L. Watkins, Jr., and E. F. Hoctor, Farmington; J. H. Martin, Ironton; C. H. Appleberry, Flat River; Edgar Wallace, Potosi.

The Woman's Auxiliary met at the same time.

M. T. HAW, JR., M.D., Secretary.

**WOMAN'S AUXILIARY TO THE MISSOURI STATE  
MEDICAL ASSOCIATION****Officers 1949-1950**

President, Mrs. August A. Werner, 5573 Cates, St. Louis.

President-Elect, Mrs. Dwight T. Van Del, 6637 Rockhill Rd., Kansas City.

Vice Presidents, Mrs. W. C. Cheek, Springfield; Mrs. Roy C. Dripps, St. Louis; Mrs. John H. Roberson, Hayti; Mrs. Frank B. Leitz, Kansas City.

Recording Secretary, Mrs. Charles T. Shepherd, 10 Covington Meadow, St. Louis County.

Treasurer, Mrs. W. E. Martin, Odessa.

Auditor, Mrs. George H. Thiele, Kansas City.

One Year Directors, Mrs. H. C. Bauman, Maryville; Mrs. W. S. Sewell, Springfield; Mrs. E. E. Wadlow, St.

Joseph; Mrs. A. L. Walters, Sedalia; Mrs. Frank W. Gillham, Jefferson City.

Two Year Directors, Mrs. M. P. Shy, Sedalia; Mrs. E. A. Kibbe, California; Mrs. Carl R. Ferris, Kansas City; Mrs. Norton J. Eversoll, St. Louis.

Corresponding Secretary, Mrs. Armand D. Fries, 7 W. Geyer Lane, Kirkwood.

Parliamentarian, Mrs. George W. Ruddell, St. Louis.

Chairmen of Standing Committees: Finance, Mrs. A. J. Crider, Dixon; Archives, Mrs. Dwight T. Van Del, Kansas City; *Hygeia*, Mrs. R. F. Williams, Springfield; Courtesy, Mrs. H. H. Davis, Rolla; Organization, Mrs. W. C. Cheek, Springfield; Legislation, Mrs. R. M. Houck, Excelsior Springs; Press and Publicity, Mrs. Victor B. Buhler, Kansas City; Student Loan Fund, Mrs. W. L. Allee, Eldon; Program, Mrs. C. A. McBurney, Slater; Public Relations, Mrs. Richard Sutter, University City; Circulation Manager, Mrs. W. C. Schaerrer, Kansas City; Revision, Mrs. David S. Long, Harrisonville; National Bulletin, Mrs. J. I. Byrne, St. Joseph; Essay, Mrs. Carl J. Althaus, St. Louis.

Advisory Council: Robert Mueller, M.D., St. Louis; M. Pinson Neal, M.D., Columbia; A. N. Altringer, M.D., Kansas City.

Delegates of the Woman's Auxiliary to the American Medical Association: Mrs. W. L. Allee, Eldon; Mrs. John O'Connell, Overland; Mrs. August A. Werner, St. Louis; Mrs. Dwight T. Van Del, Kansas City; Mrs. Richard A. Sutter, University City; Mrs. R. C. Haynes, Marshall; Mrs. Frank B. Leitz, Kansas City; Mrs. A. J. Crider, Dixon; Mrs. H. C. Trippe, Kansas City; Mrs. C. A. McBurney, Slater; Mrs. H. M. Gilkey, Kansas City; Mrs. W. C. Cheek, Springfield; Mrs. C. V. Wilcox, St. Louis; Mrs. F. G. Pernoud, St. Louis; Mrs. A. B. McGlothlan, St. Joseph.

**County Presidents**

Audrain, Mrs. Thomas L. Dwyer, Mexico.

Barry, Mrs. Frank T. Kerr, Monett.

Boone, Mrs. James Baker, Columbia.

Buchanan, Mrs. O. E. Whitsell, St. Joseph.

Cape Girardeau, Mrs. J. H. Keim, Cape Girardeau.

Carroll, Mrs. Eugene L. Bales, Carrollton.

Cass, Mrs. Eugene Barger, Harrisonville.

Clay, Mrs. R. M. Houck, Excelsior Springs.

Cole, Mrs. Harry B. Stauffer, Jefferson City.

Cooper, Mrs. Byron M. Stuart, Boonville.

Dunklin, Mrs. Paul Baldwin, Kennett.

Greene, Mrs. Gene W. Farthing, Springfield.

Henry, Mrs. Homer Smith, Clinton.

Howard, Mrs. W. J. Shaw, Fayette.

Jackson, Mrs. Arnold V. Arms, Kansas City.

Jefferson, Mrs. C. E. Fallett, DeSoto.

Lafayette, Mrs. Ben H. Brasher, Lexington.

Miller-Moniteau-Morgan, Mrs. H. C. Hume, Tipton.

Nodaway-Atchison-Gentry-Worth, Mrs. R. C. Person, Maryville.

Pemiscot, Mrs. J. H. Roberson, Hayti.

Perry, Mrs. O. J. Miller, Perryville.

Pettis, Mrs. H. A. Hite, Green Ridge.

St. Louis City, Mrs. W. H. Broeder, St. Louis.

St. Louis County, Mrs. Martyn Schattyn, Kirkwood.

Saline, Mrs. James A. Reid, Marshall.

St. Francois-Iron-Madison-Washington-Reynolds, Mrs. H. M. Roebber, Bonne Terre.

Scott-New Madrid-Mississippi, Mrs. S. M. Sarno, Morehouse.

South Central, Mrs. E. Claude Bohrer, West Plains.

Phelps-Crawford-Dent Pulaski, Mrs. W. H. Lytle, Rolla.



ORE AND MORE...

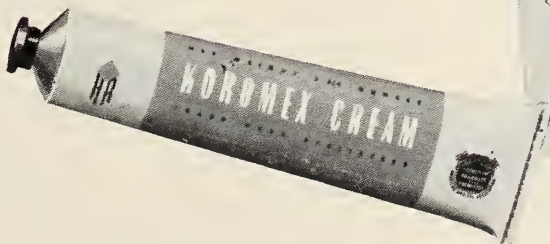
DOCTORS ACCLAIM

Karomex Jelly and Koromex Cream are two companion preparations for pregnancy control, assuring the patient of alternates for individual personal preference. Time-tested Karomex Jelly and Karomex Cream...have the same active ingredients and same pH (4.5) consistent with vaginal fluids...afford necessary dependable barrier film...instantly spermicidal on contact...will not interfere with normal vaginal biolagy.

After consideration of these features which make Karomex Jelly and Koromex Cream outstanding contraceptives, the approval given to these sterling products is indicative as to why more and more physicians are resorting to Karomex.

ACTIVE INGREDIENTS: BORIC ACID 2.0%, OXYQUINOLIN BENZOATE 0.02% AND PHENYLMERCURIC ACETATE 0.02%, IN SUITABLE JELLY OR CREAM BASES.

FOR MORE COMPREHENSIVE DATA PLEASE SEND FOR AVAILABLE PROFESSIONAL LITERATURE.



**KOROMEX**

TRADE MARK REGISTERED

"CHOICE OF PHYSICIANS"



HOLLAND-RANTOS COMPANY, INC., 145 HUDSON STREET, NEW YORK 13, N. Y.

MERIE L. YOUNGS • PRESIDENT

**COUNTY SOCIETY HONOR ROLL 1949**

(Societies which have paid Dues for All Members and date placed on Honor Roll)

Miller County Medical Society, December 8, 1948.  
Camden County Medical Society, December 10, 1948.  
Benton County Medical Society, December 14, 1948.  
Ste. Genevieve County Medical Society, December 16, 1948.  
Laclede County Medical Society, December 18, 1948.  
Dallas, Hickory, Polk Counties Medical Society, December 23, 1948.  
Carter-Shannon County Medical Society, December 30, 1948.  
Lewis, Clark, Scotland Counties Medical Society, January 3, 1949.  
Audrain County Medical Society, January 5, 1949.  
Webster County Medical Society, January 8, 1949.  
Harrison County Medical Society, January 10, 1949.  
Mississippi County Medical Society, January 12, 1949.  
Howard County Medical Society, January 15, 1949.  
Henry County Medical Society, January 16, 1949.  
Morgan County Medical Society, January 19, 1949.  
Callaway County Medical Society, January 21, 1949.  
Carroll County Medical Society, January 24, 1949.  
Pettis County Medical Society, January 26, 1949.  
Holt County Medical Society, January 29, 1949.  
Cape Girardeau County Medical Society, February 1, 1949.  
Bates County Medical Society, February 8, 1949.  
Mercer County Medical Society, February 8, 1949.  
Pike County Medical Society, February 9, 1949.  
Clinton County Medical Society, February 15, 1949.  
St. Francois-Iron-Madison-Washington-Reynolds Counties, February 18, 1949.  
Montgomery County Medical Society, February 24, 1949.  
South Central Counties Medical Society, February 28, 1949.  
Perry County Medical Society, March 10, 1949.  
Andrew County Medical Society, March 12, 1949.  
Cass County Medical Society, March 15, 1949.

**BOOK REVIEWS**

**BLOOD TRANSFUSION.** By Elmer L. DeGowin, M.D.; Associate Professor of Internal Medicine, State University of Iowa; Director, Blood Transfusion Service, University Hospitals; Member of the Committee on Blood and Blood Derivatives, National Research Council; Member of the Advisory Board for Health Services, American National Red Cross; Robert C. Hardin, M.D., Assistant Professor of Internal Medicine, State University of Iowa; Formerly Senior Consultant in Blood Transfusion and Shock in the European Theater of Operations, U. S. Army, and Commanding Officer of the ETO Blood Bank; and John B. Alsever,

M.D., Senior Surgeon, U. S. Public Health Service; Chief, Professional Standards, Hospital Division, U.S.P.H.S.; Director of the Syracuse University Blood Transfusion Service, 1940-42; Technical Director of the Blood Plasma Section, Medical Division, U. S. Office of Civilian Defense, 1942-44; Director of the Civilian Blood Donor Service and Associate National Medical Director, The American National Red Cross, 1944-46. Illustrated with two hundred diagrammatic drawings. W. B. Saunders Company, Philadelphia & London. 1949. Price \$9.00.

This concise yet thorough discussion of blood transfusions, blood banking and the problems inherent to such activities is one of the best yet published.

The technical information is exceptionally clear and well arranged. It is free of typographical errors and should serve as a useful reference to technicians and physicians.

The choice of the various therapeutic agents, blood, blood derivatives and plasma is ably discussed.

The portion of the book devoted to the organization and management of blood banks is excellent and if carefully read by the clinicians will give them a great deal of insight to the problems of the blood bank and the personnel who manage it.

This book should be in the library of all blood banks and should be read by all who use blood and blood substitutes as therapeutic agents.

R. O. M.

**CLINICAL ASPECTS AND TREATMENT OF SURGICAL INFECTIONS.** By Frank Lamont Meleney, M.D., Associate Professor of Clinical Surgery, College of Physicians and Surgeons, Columbia University; Associate Visiting Surgeon, Presbyterian Hospital, New York City. With a Foreword by Allen O. Whipple, M.D. Illustrated. W. B. Saunders Company. Philadelphia & London. 1949. Price \$12.00.

The purpose of this book is to relate the experiences of the author, his associates, members of other departments of the Columbia-Presbyterian Medical Center and, in addition, by a review of the literature, the experiences of other workers in the treatment of the so-called "surgical infections" produced by necrotizing and pyogenic organisms. This book is meant as a companion volume to the "Treatise on Surgical Infections" by the same author, published in July 1948 by the Oxford University Press, in which are outlined the principles in the entrance, establishment and spread of bacteria in the body and the mechanisms of the body against infection and in which are also related the experiences of the author and his group in the laboratory for bacteriological research of the Department of Surgery at Columbia University for the last twenty some odd years.

The text and references comprise 782 pages, divided into eighteen chapters. Chapter I by John S. Lockwood, M.D., a former resident of Dr. Meleney, entitled "Physiological Considerations in Surgical Infections" serves as an excellent introduction to the chapters following on surgical infections of the various parts of the body and organs. The material is well presented in these chapters. The concluding chapter, "Surgical Infections in War Wounds," is written by Alfred B. Longacre, M.D., and William P. Sandusky, M.D., both former residents of Dr. Meleney. There are nearly 300 figures, seventeen tables, numerous illustrative cases well presented, comprehensive bibliographic references and a thorough index.

As more recently discovered antibiotics become avail-





# Daricraft Babies

More and more  
doctors are prescribing  
Daricraft Homogenized  
Evaporated Milk  
for babies . . . and for  
convalescent diets

Always uniform in quality, safe, steri-  
lized, high in food value and minerals.  
Contains 400 U. S. P. units Vitamin D  
per pint of Daricraft. Easily digested.



PRODUCERS CREAMERY CO., SPRINGFIELD, MO.

Advertisement



From where I sit  
by Joe Marsh

## Duke Gets His Tractor

*Duke Thomas bought a farm with the money he'd saved in the Service, but he couldn't get a tractor. He needed it badly, but was tenth on the local dealer's list.*

"Tell you what," old man Peters says. "If those nine fellows ahead of you agree, you'll get the next one I get in." "No, thanks," says Duke, "I'll just take my turn."

*But old Peters mails out nine post-cards. And the other day he tells Duke his tractor will be in next week. "I simply wrote the facts to the fellows ahead of you. They decided it."*

From where I sit, it's that spirit of understanding that helps make our democracy so great. Understanding for the other fellow's problems and respect for the other fellow's rights—whether it's his right to earn a living, his right to cast his vote against your candidate, or even his right to enjoy a moderate, friendly glass of beer or ale—if and when he chooses. Let's always keep it that way!

Joe Marsh

Copyright, 1949, United States Brewers Foundation

able and other antibiotics are discovered, the treatment as discussed in this book will undoubtedly change. However, it seems that the surgical principles will not alter much, if any at all. This book can be recommended as profitable reading to students and graduates and will serve as an excellent review of the treatment of surgical infections as of the middle of 1948. S. V.

**PATHOLOGY.** Edited by W. A. D. Anderson, M.D., Professor of Pathology and Bacteriology, Marquette University School of Medicine, Milwaukee, Wisconsin. With 1,183 Illustrations and 10 Color Plates. C. V. Mosby Company. St. Louis. 1948. Price \$15.00.

Thirty-two pathologists have contributed to this new book on pathology, edited by Anderson, to make it one of the best textbooks on the subject.

After an introduction by Paul Klemperer, the principles of general pathology are considered, beginning with a chapter by E. V. Cowdry on "Cells and Their Behavior." In subsequent chapters, injury, inflammation and tissue repair are considered and, finally, the lesions of the individual organs and tissues. A final chapter considers "Heredity and Constitution in Disease."

All of the chapters appear to be well organized, authoritative and well written. Because of its increasing importance, this reviewer was particularly impressed by the chapter by Charles E. Dunlap on the "Effects of Radiation" which summarizes some of the data on the biologic effects of x-ray radiation and radio active substances.

The book is highly recommended both for study and reference. B. S. P.

**WAR, POLITICS, AND INSANITY.** By C. S. Bluemel, M.D. The World Press, Inc. Denver, Colorado. 1948.

This booklet of 117 pages might be read profitably by any one practicing medicine, but especially by those interested in government. He devotes one chapter to "Causes of War" and another one to "Dominance in the Animal World." He calls attention to the social life of bees and ants. In contrast he calls attention to the fact that man has yet to establish his first successful society. He stresses the fact that dominance may prevail rather than the best equipped individual for an important opinion or position. That dominance identifies the degree of civilization in a community.

Over and over again the author dwells on the mental defects or psychosis in a great many rulers covering the last two thousand years. He calls attention to the fact that Wright Bros. and Charles Lindbergh represented obsessive-compulsive patterns; that these patterns have often been of much value to mankind and civilization. He discusses senile dementia, hypomania, melancholia, paranoia, schizophrenia and the constitutional psychopathic state.

Among the more recent leaders he cites especially the personality disorders of Gandhi, Hitler, Mussolini and Stalin. He states two recent presidents of the United States have shown mental deterioration, and thereby possibly made some serious blunders in international dealings; that von Hindenburg was senile when he became ruler of Germany and made it easier for Hitler to become dictator.

In the tenth chapter, entitled "An Appraisal of Democracy" he points out the defects. He states that congressmen represent local rather than National interests; that the possible solution to the dilemma is not clear.

In the final eleventh chapter, "The Future of De-

mocracy," he leaves with the reader a rather pessimistic conclusion. A. L. S.

**PEDIATRICS AND THE EMOTIONAL NEEDS OF THE CHILD,** As discussed by pediatricians and psychiatrists at Hershey, Pennsylvania, March 6-8, 1947. Edited by Helen L. Witmer, The Commonwealth Fund. New York. 1948. Price \$15.00.

In March 1947 a group of pediatricians, psychiatrists and social workers met at Hershey, Pennsylvania, to discuss a more comprehensive approach to pediatric service. This book is a selective report of that conference.

It was the opinion of Dr. Milton J. E. Senn that much of the literature on growth and development in the child comes from the pen of writers with little experience in clinical pediatrics. Their observations have been based mainly on planned studies. Although practicing pediatricians are more and more considering the physical and psychologic elements together, pediatric literature continues to be dominated by accounts of diseases of infants and children. This material is grouped, chiefly, under such headings as etiology, symptoms, laboratory tests, diagnosis and treatment. Occasionally in the discussion of therapy, material on emotional growth and development will be included.

Dr. Benjamin Spock emphasized the importance of establishing as soon as the child is born a good mother-child relationship. The rooming-in plan which is being tried in several hospitals at the present time is a definite step in that direction.

Whether or not doctors should be prepared to deal with the emotional problems of children was a subject under discussion.

Miss Charlotte Towle, speaker from a social workers point of view, said that their work failed miserably at times because they were working with "pediatricians who did not really understand mothers and children: consequently, a nice integration of the two professions was not achieved."

In discussing what the practicing pediatrician can do in the field of mental health, Dr. William S. Langford concluded that the work fell into three general areas: "prevention, the care of minor disturbances and the care of the well developed disorders."

A report was given on a few medical schools which have been carrying on work in mental health for a number of years. The importance of a good child guidance clinic in every medical school was emphasized. Such clinics bring up serious economic problems but more and more the child guidance clinic is being considered a necessity rather than a luxury. The effort today is to give pediatric training in psychology and not to train the pediatrician to be a "pediatric psychiatrist." The basic teaching should begin in the first two years of medical education and during the third and fourth years work should be given in clinical manifestations of psychiatric illness.

In discussing the next steps in furthering comprehensive pediatric service, Dr. A. A. Welch held that the need is not so much for new facilities as for better use of those we already have.

Helen L. Witmer, in summarizing the conference, writes that the experiences of the doctors speaking would indicate that they have been reasonably comfortable dealing with the physical phases of growth and development for some time, but are not so comfortable in dealing with emotional phases of growth and development. I. C. K.



# COSMO CAUTERY COMPANY

4215 Virginia Ave.

St. Louis 11, Mo.

## COSMO CERVIX COAGULATOR

Cervical treatment by electro-coagulation with this unit is superior to other methods because the doctor can control the extent of coagulation and reach the deeply imbedded infections.

This unit will not create nauseating smoke and odor due to searing tissue and gives the doctor greater freedom of post-operative complications such as stenosis, excessive scar tissue, etc.

Furnished with leatherette carrying case and 3 interchangeable silver applicators for stripping, spotting and puncturing. ONLY \$26.50 COMPLETE.



Only \$26.50  
Complete

## COSMO CAUTERY UNIT

Removal of verucca, nevi, etc., with a Cosmo Cautery Unit provides a gentle, effective office treatment with a minimum of patient discomfort.

The unit is easy to operate; technic requires no anesthetic; heat is controlled and device shockproof. Usable around eyes and hairline; will not cause scar tissue.

Furnished with leatherette carrying case and 5 interchangeable silver applicators. The applicators are graduated in sizes to handle various sized blemishes and assure even sloughing. ONLY \$22.50 COMPLETE.



Only \$22.50  
Complete

ONE YEAR GUARANTEE

Ask Your Dealer for Descriptive Literature

ST. LOUIS

A. S. Aloe Co.  
Hamilton-Schmidt Co.  
Edmund F. Hanley Co.  
Charles A. Schmidt Co.

KANSAS CITY

A. S. Aloe Co.  
Chas. Russell Co. Inc.  
Goetze-Niemer Co.

JOPLIN

Goetze-Niemer Co.

ST. JOSEPH

Goetze-Niemer Co.

# MILWAUKEE SANITARIUM

WAUWATOSA, WISCONSIN

## FOR NERVOUS DISORDERS

Maintaining the highest standards for more than a half century, the Milwaukee Sanitarium stands for all that is best in the care and treatment of nervous disorders. Photographs and particulars on request.

(Chicago Office— 1117 Marshall Field Annex  
Wednesday, 1-3 P. M.)

JOSEF A. KINDWALL, M.D.  
CARROLL W. OSGOOD, M.D.  
WILLIAM T. KRADWELL, M.D.  
BENJAMIN A. RUSKIN, M.D.  
LEWIS DANZIGER, M.D.  
RUSSELL C. MORRISON, M.D.  
G. CHARLES SUTCH, M.D.  
RAYMOND HEADLEE, M.D.  
ARTHUR J. PATEK, M.D., Consultant  
G. H. SCHROEDER, Business Manager

COLONIAL HALL—One of the 14 Units in "Cottage Plan."



# MEAT...

## *and Physical Rehabilitation*

Any marked loss of weight in the nonobese patient deprives the organism of a considerable amount of protein, apt to lead to severe protein deficiency. A weight loss of 5 Kg. does not appear large as such. Yet it is estimated that it may well entail a simultaneous loss of as much as 900 Gm.—or two pounds—of tissue protein,\* taken from the scant protein stores of the body, from the muscles, liver and other viscera. Prevention of such large protein losses or rapid replacement of depleted protein stores is imperative. Nitrogen balance must be re-established as quickly as possible to promote local healing and general recovery in many surgical conditions, in severe burns, in metabolic disturbances, and following overwhelming infections.

Meat as the primary source of protein affords a number of special advantages in the period of actual dietotherapy as well as during recovery and rehabilitation. It is of excellent digestibility so that it can be easily eaten two or three times a day to satisfy increased protein requirements.

The appetizing taste appeal encourages simultaneous intake of other valuable foods, especially desirable in the presence of anorexia.

All meat is notably rich in biologically complete protein, from 17 to 20 per cent of its uncooked and from 25 to 30 per cent of its cooked weight. Furthermore, meat ranks with the best sources of B-complex vitamins and iron, important nutrient factors in physical rehabilitation.

---

\*Meyer, K. A., and Kozoll, D.D.: Progress in the Treatment of Carcinoma of the Stomach and Esophagus, South Dakota J. Med. & Pharm. 2:39 (Feb.) 1949.

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.



**American Meat Institute**  
Main Office, Chicago...Members Throughout the United States





**GIEMSA STAIN**

*Certified*

Inspected and approved by  
COMMISSION ON  
STANDARDIZATION OF  
BIOLOGICAL STAINS

Prepared according to the  
formula of L. R. Lillie, Jr.  
Lab. & Clin. Med. 28:15,  
1872-1875, (Dec.) 1943.

Our Giemsa Stain is made in our  
own laboratories and is fully equal to any  
made anywhere in the world. Exclusively  
prepared to provide the hematologist with  
a product of unquestionable reliability and  
uniformity. We invite your inquiries.

Write for our complete cata-  
log of Laboratory Reagents  
and supplies.

**GRADWOHL**  
LABORATORIES  
R. B. H. Gradwohl, M. D., Director  
3514 Lucas Av. St. Louis, Mo.

# SUCTION SOCKETS



Artificial legs without hampering straps  
have been the shining hope of amputees.  
Recently, the development of the Suc-  
tion Socket Leg for above knee amputees  
seemed to realize this hope.

We understood what this type of limb could mean to  
the amputee. But we knew that these limbs were not  
perfected. Thus, in 1947, we joined with the Commit-  
tee on Artificial Limbs and the VA in a program of  
research on the Suction Socket Limb. Under this  
program veteran cases have been awarded by the  
VA to companies having certified suction socket fitters.  
To date we have fitted well over 100 suction socket  
cases, of which 90% have been satisfactory.

Results of research show only about 20% of cases  
suitable for suction sockets. Results also show that  
close cooperation with doctors is necessary. Hanger is  
continuing research toward the amputee's great hope,  
and will keep the medical profession informed of its  
progress.

**HANGER** ARTIFICIAL LIMBS

1912-14 Olive Street  
St. Louis 3, Missouri

# PROMISE... and Performance



Born 1820...  
Still going strong



Yes, Johnnie Walker  
always delivers as  
promised. When you  
savour this smoother-  
than-smooth Scotch,  
you always enjoy  
whisky of superlative  
mellowness and rich-  
ness of flavour to the  
very last sip.

RED LABEL

BLACK LABEL

Both 86.8 proof

**JOHNNIE  
WALKER**

BLENDED SCOTCH WHISKY

Canada Dry Ginger Ale, Inc., New York, N. Y.  
Sole Importer

★ **“Buy U. S. Savings Bonds  
during the Opportunity Drive,”** ★

*SAY THESE LEADING AMERICANS*

**PHILIP MURRAY, President,  
Congress of Industrial  
Organizations**



“The C.I.O. has endorsed every effort to encourage the worker to put more of his earnings into U. S. Savings Bonds. They represent both security and independence.”

**WINTHROP W. ALDRICH,  
Chairman, Chase National Bank**



“I believe that every individual who can possibly do so should buy more U. S. Savings Bonds. These bonds represent one of the best investments of our time.”

**WILLIAM GREEN, President,  
American Federation of Labor**



“For the working man, an increased investment in U. S. Savings Bonds can mean not only increased security but increased ability to take advantage of the opportunities in America today.”

**CHARLES F. BRANNAN,  
Secretary of Agriculture**



“I am heartily in favor of the Opportunity Drive to buy more U. S. Savings Bonds. Everyone engaged in farming should recognize the importance of a backlog of invested savings as a means of realizing the agricultural opportunities of the future.”

**D**URING MAY AND JUNE, the U. S. Savings Bond Opportunity Drive is on!

It is called the Opportunity Drive—because it is truly an opportunity for *you* to get ahead by increasing your own personal measure of financial security and independence.

If you haven't been buying Savings Bonds regularly, start *now*.

If you have been buying them, add an *extra* Bond or two to your purchases this month and next. Remember—you'll get back \$4 for every \$3 in a short ten years' time!

***Put More Opportunity  
in Your Future . . .***

**INVEST IN U. S. SAVINGS BONDS**

*Contributed by this magazine in cooperation with the  
Magazine Publishers of America as a public service.*



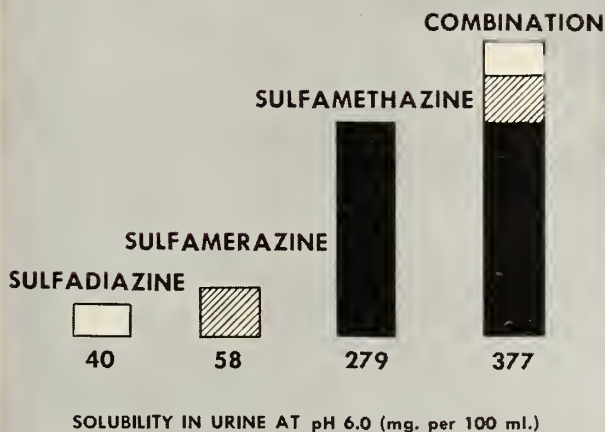
**Ad No. 445-C**



# INCREASED MARGIN OF SAFETY — A ***NEW*** IMPROVED TRIPLE-SULFA COMBINATION

## TRISULFAZINE

TRADEMARK



*Sulfamethazine plus sulfadiazine plus sulfamerazine provides a new, effective triple-sulfonamide combination that presents a minimal hazard of toxic reactions—particularly crystalluria.*

Sulfamethazine "... can be considered to be a real advance, more especially as its therapeutic activity is of the same order as the parent compound, sulphadiazine."<sup>1</sup>

<sup>1</sup> Whitby, L.: Practitioner 155: 264 (1945).



**FEATURES** • Low toxicity—reduced danger of crystalluria • Potency—intensive dosages feasible • Simplicity and convenience—reduced need for adjuvant alkali or fluid administration • Prolonged action—because of sustained blood levels • Rapid effect—components of the mixture pass quickly into tissue fluids.

**Available in two convenient dosage forms:**

*Tablets:* 0.166 Gm. each sulfonamide per 0.5-Gm. tablet.

*Palatabs\** (Half Strength): 0.083 Gm. each sulfonamide per 0.25-Gm. peppermint-flavored *Palatab.*

\*Trademark of The Central Pharmacal Co.

### THE CENTRAL PHARMACAL COMPANY

*Pharmaceutical Progress Since 1904*

SEYMOUR . . . . . INDIANA



# C - O - M - F - O - R - T YOU HAVE NEVER KNOWN BEFORE

## "WASHED" AIR IS WHOLESOME AIR

The moment you enter a Rexaired room, you will notice how fresh the air is; how comfortable it is to breathe. Rexair is the amazing new appliance that actually improves the air you breathe.

Rexair takes dust from carpets, bare floors, drapes, upholstered furniture, and from the air itself. Rexair collects dust and dirt in a water bath; discharges cleaner and moistened air back into the room.

The longer Rexair runs, the cleaner and fresher the air becomes. Rexair has no porous bag from which dust can escape back into the air you breathe. Dust is permanently trapped in water. You pour the water down the drain—dust and dirt go with it.

Illustrated at the right is a Rexair with the reservoir cut away to show the water which traps and holds dust so that it cannot escape. You feel better and work better when the air you breathe is clean, fresh, and wholesome.

**REXAIR DIVISION, MARTIN-PARRY CORP.**  
Box 964, Toledo 1, Ohio, Dept. N-59



**FREE BOOK—Send for this free, illustrated 12-page book. Shows how Rexair even cleans the air you breathe.**

Advertised in  
AMERICAN  
MEDICAL  
ASSOCIATION  
PUBLICATIONS

# Rexair



One of Four Main Buildings

## GLENWOOD SANATORIUM

A Private Hospital for Care of Nervous and Mental Disorders, Alcohol and Narcotic Addictions.

Thoroughly equipped for all the approved therapeutic measures. Insulin, metrazol and electro shock used in selected cases.

Four main buildings for patients permit ample classification facilities. Large grounds composed of about fifty acres make many out-of-door activities possible.

Phone WEBster 1056

Visiting Consultant  
**W. W. GRAVES, M.D.**  
Visiting Neuropsychiatrist  
**SYDNEY B. MAUGHS, M.D.**

Medical Superintendent  
**PAUL HINES, M.D.**  
Resident Physicians  
**RICHARD J. HESSBERG, M.D.**  
**LEROY J. DIERKER, M.D.**

For full information, address

**PAUL HINES, M.D., Medical Superintendent, Webster Groves, St. Louis 19, Mo.**





## SHOW HOW = KNOW HOW

Knowing that the success of her business career depends to a major extent on the satisfaction her patrons derive from their Luzier preparations, your Cosmetic Consultant is vitally concerned not only that the preparations are suited in every respect to your requirements and preferences but, just as important, that you thoroughly understand the sequence and manner of applying them to obtain the best results. The Luzier Application Chart is designed for her to use in showing you how we recommend that our preparations be applied. This chart provides space for an outline of your service with suggestions based on your particular requirements.

### Luzier's Fine Cosmetics and Perfumes Are Distributed in Missouri by:

#### Chilcutt and Chilcutt, Divisional Distributors

Box 774, Jefferson City, Missouri

##### DISTRIBUTORS

Pearl Jackson  
510 Woodlawn  
Mexico, Mo.

Bonnie Fox  
722 S. Jefferson  
Springfield, Mo.

Elva Gones  
305½ W. 4th  
Hannibal, Mo.

Verna Bell Prophet  
338 Landers Bldg.  
Springfield, Mo.

#### Glenna Sanders, Divisional Distributor

4944 Murdock St.

Phone Plateau 4442 St. Louis, Mo.

##### DISTRIBUTORS

Blanche Becker  
6502 Emma  
Jennings, Mo.  
Phone Mulberry 7712

#### Alpha Eade, Divisional Distributor

705 Olive Street, Room 511

Phone GA 5347 St. Louis 1, Missouri

##### DISTRIBUTORS

Mrs. Anna L. Brown  
2317 Indiana Ave.  
St. Louis 4, Mo.  
Phone GR 2918

Mrs. Betty H. Crain  
5367 Gladstone  
Normandy 21, Mo.  
Phone GO 6714


Mrs. Viola M. Dilg  
426 Northridge  
St. Louis 15, Mo.  
Phone CO 7919

Rose Miller  
1121 Fullerton Bldg.  
122 N. 7th St.  
St. Louis 1, Mo.  
Phone GA 5335

Laura B. Roberson  
3412 Humphrey  
St. Louis 18, Mo.  
Phone LA 1833

Mrs. Myrle C. Treanor  
5974 Julian  
St. Louis 12, Mo.  
Phone DE 8067

**CAMP** SURGICAL  
TRADE MARK SUPPORTS



*For maternity and post operative cases*

**THE W. E. ISLE CO.** 1121 GRAND AVE.  
KANSAS CITY, MO.  
ENTIRE SECOND FLOOR VICTOR 2350

## Mullen Ambulance Company

PRIVATE AMBULANCE  
SERVICE

Local and Distant Trips  
Day or Night

5159 Delmar, ST. LOUIS Forest 1913



## The Mary E. Pogue School

Complete facilities for training Retarded and Epileptic children educationally and socially. Pupils per teacher strictly limited. Excellent educational, physical and occupational therapy programs.

Recreational facilities include riding, group games, selected movies under competent supervision of skilled personnel.

Catalogue on request.

G. H. Marquardt, M.D. Barclay J. Macgregor  
Medical Director Registrar

27 Geneva Road, Wheaton, Illinois  
(Near Chicago)

## The Norbury Sanatorium

Established 1901—Incorporated—  
Licensed—Jacksonville, Illinois

• ALBERT H. DOLLEAR, B.S., M.D., Superintendent. FRANK GARM NORBURY, A.M., M.D., Medical Director. SAMUEL N. CLARK, M.D., Physician. HENRY A. DOLLEAR, M.D., Physician.



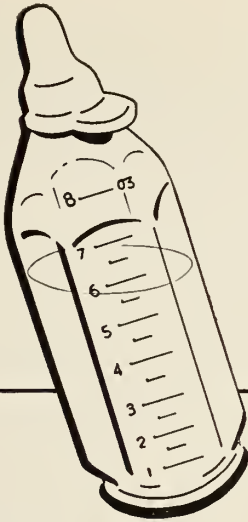
### Maplecrest

• Pictured above — Restful, congenial home-like surroundings are combined with the most modern diagnostic and therapeutic equipment.

### Maplewood

• Pictured at left — Most comfortable homes for individuals requiring rest, scientific diagnosis and treatment. Fireproof construction.





**20 CALORIES** *per ounce*

**...OR 30...OR 40**

## *Big meals for small stomachs*

"It is, at times, necessary to give food of a considerably higher caloric value than would be anticipated. Giving of a food of a caloric value too low to meet the infant's needs is by all odds the chief cause of failure in infant feeding."\*

When feedings of higher than normal caloric value are indicated, how simple it is with Similac! You merely increase the amount of Similac powder to be added to each ounce of water. The relation of all the nutritive elements to each other *remains the same* as in normal breast milk. And the Digestive Factor *does not change*; for Similac has a consistently *zero curd tension* like breast milk—even in mixtures of double the normal caloric value.

\*Page 51, *Infant Nutrition: Jeans and Mariott, 1947.*



One measure (included in each can) of Similac added to two ounces of water makes two ounces of the normal formula—20 calories per ounce.

# SIMILAC

*Similar to breast milk*



SIMILAC DIVISION • M & R DIETETIC LABS, INC. • COLUMBUS 16, OHIO

## AT HOME OR AWAY

## SPOT TESTS

## SIMPLIFY URINALYSIS

**No Test Tubes • No Measuring • No Boiling**

Diabetics welcome "Spot Tests" (ready to use dry reagents), because of the ease and simplicity in using. No test tubes, no boiling, no measuring; just a little powder, a little urine—color reaction occurs at once if sugar or acetone is present.

### *Galatest... Acetone Test* (DENCO)

FOR DETECTION OF  
SUGAR IN THE URINE

FOR DETECTION OF  
ACETONE IN THE URINE

#### SAME SIMPLE TECHNIQUE FOR BOTH

1. A LITTLE POWDER

2. A LITTLE URINE



COLOR REACTION IMMEDIATELY

A carrying case containing one vial of Acetone Test (Denco) and one vial of Galatest is now available. This is very convenient for the medical bag or for the diabetic patient. The case also contains a medicine dropper and a Galatest color chart. This handy kit or refills of Acetone Test (Denco) and Galatest are obtainable at all prescription pharmacies and surgical supply houses.

Accepted for advertising in the *Journal of the A.M.A.*  
WRITE FOR DESCRIPTIVE LITERATURE

*Acetone Test* (DENCO) ... *Galatest*  
**The Denver Chemical Manufacturing Co., Inc.**  
163 Varick Street, New York 13, N. Y.

## All worth while laboratory examinations; including—

Tissue Diagnosis

The Wassermann and Kahn Tests

Blood Chemistry

Bacteriology and Clinical Pathology

X-Ray including Gastro-Intestinal Study and

Gall Bladder Visualization

Basal Metabolism

Pregnancy Test

Electrocardiograms with interpretation

## National Pathological Laboratory

RALPH L. THOMPSON, M.D., Director  
601-616 University Club Bldg.  
ST. LOUIS  
Telephone JEFFerson 6088

### Cook County Graduate School of Medicine Announces Continuous Courses

**SURGERY**—Intensive Course in Surgical Technique, two weeks, starting June 20, July 25, August 22. Surgical Technique, Surgical Anatomy & Clinical Surgery, four weeks, starting June 6, July 11, August 8.

Surgical Anatomy & Clinical Surgery, two weeks, starting May 16, June 20, July 25.

Surgery of Colon & Rectum, one week, starting June 13, September 12.

Esophageal Surgery, one week, starting June 13.

Thoracic Surgery, one week, starting June 20.

Breast & Thyroid Surgery, one week, starting June 27.

Fractures & Traumatic Surgery, two weeks, starting June 13, October 3.

**GYNECOLOGY**—Intensive Course, two weeks, starting June 20, September 26.

Vaginal Approach to Pelvic Surgery, one week, starting May 16, June 13, September 19.

**OBSTETRICS**—Intensive Course, two weeks, starting May 16, September 12.

**MEDICINE**—Intensive General Course, two weeks, starting June 13, October 3.

Electrocardiography & Heart Disease, two weeks, starting July 18.

Gastroenterology, two weeks, starting June 27.

Personal Course in Gastroscopy, two weeks, starting May 16, June 13.

**PEDIATRICS**—Diagnosis & Treatment of Congenital Malformations of Heart, two weeks, starting June 13.

Personal Course in Cerebral Palsy, two weeks, starting August 1.

**DERMATOLOGY**—Formal Course, two weeks, starting June 13.

Informal Clinical Course every two weeks.

**CYSTOSCOPY**—Ten Day Practical Course every two weeks.

**UROLOGY**—Intensive Course, two weeks, starting September 26.

General, Intensive and Special Courses in All Branches of Medicine, Surgery and the Specialties

Teaching Faculty—Attending Staff, Cook County Hospital

Registrar, 427 South Honore St., Chicago 12, Ill.

## ACCIDENT • HOSPITAL • SICKNESS

# INSURANCE

For Physicians, Surgeons, Dentists Exclusively



**\$5,000.00 accidental death \$ 8.00**

\$25.00 weekly indemnity, accident and sickness quarterly

**\$10,000.00 accidental death \$16.00**

\$50.00 weekly indemnity, accident and sickness quarterly

**\$15,000.00 accidental death \$24.00**

\$75.00 weekly indemnity, accident and sickness quarterly

**\$20,000.00 accidental death \$32.00**

\$100.00 weekly indemnity, accident and sickness quarterly

Also Hospital Expense for Members  
Wives and Children

85c out of each \$1.00 gross income used for  
members' benefit

INVESTED ASSETS

\$3,700,000.00

PAID FOR CLAIMS

\$15,700,000.00

\$200,000.00 deposited with State of Nebraska  
for protection of our members.

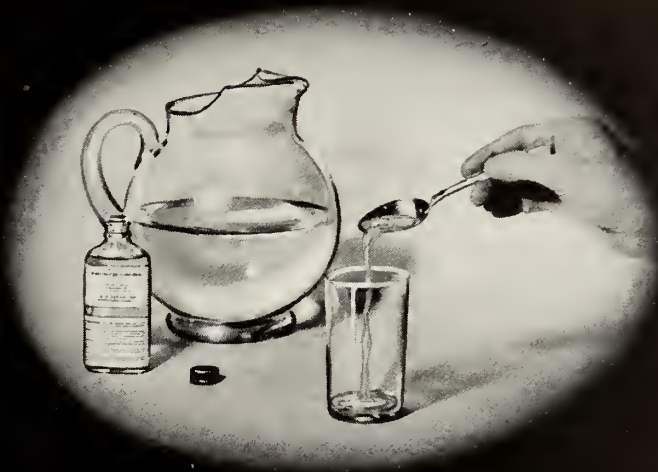
Disability need not be incurred in line of duty—benefits  
from the beginning day of disability

**PHYSICIANS CASUALTY ASSOCIATION  
PHYSICIANS HEALTH ASSOCIATION**

47 years under the same management  
400 First National Bank Building, OMAHA 2, NEBR.



# Judicious Laxation



## through ease of administration

Of the many features which have won far Phospho-Soda (Fleet)\* on impressive record of clinical acceptance, outstanding is its ease of administration. This, together with its controlled action, and its freedom from undesirable side effects, gives assurance that every prescription of Phospho-Soda (Fleet) will result in thoroughly effective — yet gentle — catharsis.



C. B. FLEET CO., INC. • LYNCHBURG, VIRGINIA

\*'PHOSPHO-SODA' and 'FLEET' are registered trade-marks of C. B. Fleet Co., Inc.

## PHOSPHO-SODA (FLEET)

### CHECK LIST for choice of a laxative

Phospho-Soda (FLEET)	TYPE OF ACTION	Phospho-Soda (FLEET)	SIDE EFFECTS	Phospho-Soda (FLEET)	ADMINISTRATION	Phospho-Soda (FLEET)
✓	Prompt action	✓	Absence of Constipation Rebound	✓	Flexible Dosage	✓
✓	Thorough action	✓	No Development of Tolerance	✓	Uniform Potency	✓
✓	Gentle action	✓	Safe from Excessive Dehydration	✓	Pleasant Taste	✓
✓	Free from Mucosal Irritation	✓	Nonhabituating	✓	Free from Cumulative Effects	✓
			No Disturbance of Absorption of Nutritive Elements	✓		
			Causes no Pelvic Congestion	✓		
			No Potent Discomfort	✓		

Phospho-Soda (Fleet) is a solution containing in each 100 cc. sodium biphosphate 48 Gm. and sodium phosphate 18 Gm.

ACCEPTED FOR ADVERTISING BY THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

## COMMERCIAL ANNOUNCEMENTS

WANTED: M. D. trained in Obstetrics and Pediatrics to join new clinic now being organized—central Iowa town of 7,500—new air conditioned ground floor offices. Address Box 163, Missouri State Medical Association, 623 Missouri Bldg., St. Louis 3, Mo.

FOR SALE: X-Ray, instruments, and a supply of medicine left by the late Dr. M. B. Barber. A list will be mailed or you may see these by communicating with Mrs. M. B. Barber, 219 South Main Street, Fredericktown, Mo.

**THE STOKES SANITARIUM**

923 Cherokee Road, Louisville, Kentucky  
Our ALCOHOLIC treatment destroys the craving, restores the appetite and sleep, and rebuilds the physical and nervous condition of the patient. Liquors withdrawn gradually; no limit on the amount necessary to prevent or relieve delirium.

MENTAL patients have every comfort that their home affords.

The DRUG treatment is one of gradual Reduction. It relieves the constipation, restores the appetite and sleep; withdrawal pains are absent. No Hyoscine or rapid withdrawal methods used.

NERVOUS patients are accepted by us for observation and diagnosis as well as treatment.

E. W. STOKES, Medical Director. Established 1904  
Telephone—Highland 2101

Hair Permanently Removed by Electrolysis

**DOROTHY WORRELL, R.N.**

233 Vandeventer, St. Louis

Telephone, Jefferson 9436

*Work Done on Prescription of Physicians Only*

**The Neurological Hospital,  
2625 The Paseo, Kansas City,  
Missouri. Operated by the Rob-  
inson Clinic, for the care and  
treatment of nervous and men-  
tal patients and associated  
conditions.**

**FAITH HOSPITAL**

**A. J. SIGNORELLI, M.D.,**

*Medical Director*

Goodfellow 6262

**2800 N. Taylor, St. Louis, Mo.**

## INDEX TO ADVERTISERS

Abbott Laboratories .....	357
Aloe, A. S., Company .....	326
American Meat Institute .....	376
Arlington Chemical Co. ....	328
Ayerst, McKenna & Harrison, Ltd. ....	367
Camel Cigarettes .....	325
Camp, S. H., & Co. ....	320
Canada Dry Ginger Ale, Inc. ....	377
Central Pharmacal Co. ....	379
Coca-Cola Company .....	353
Cook County Graduate School of Medicine.....	384
Cosmo-Cautery Co. ....	375
Denver Chemical Mfg. Co., Inc. ....	384
Duncan Laboratories .....	387
Faith Hospital .....	386
Fleet, C. B., Co., Inc. ....	385
Glenwood Sanatorium .....	380
Gradwohl Laboratories .....	377
Hamilton Schmidt .....	332
Hanger, J. E., Inc. ....	377
Holland-Rantos Co. ....	371
Isle, W. E., Co. ....	382
Lederle Labs. ....	363
Lilly, Eli, & Co. ....	Insert
Luzier's, Inc. ....	381
M & R Dietetic Labs., Inc. ....	383
Major Clinic .....	321
Mead Johnson & Co. ....	388
Medical Protective Co. ....	332
Merck & Co., Inc. ....	365
Milwaukee Sanitarium .....	375
Mullen Ambulance .....	382
National Pathological Labs. ....	384
Norbury Sanatorium .....	382
North Shore Health Resort .....	328
Parke, Davis & Co. ....	318, 319
Philip Morris & Co. ....	329
Physicians Casualty Assn. ....	384
Pogue, Mary E., School .....	382
Producers Creamery Co. ....	373
Quincy X-Ray & Radium Labs. ....	332
Ralph Sanitarium .....	330
Rexair Division, Martin-Parry Corp. ....	380
Robinson Clinic, Inc. ....	386
Sandoz Chemical Works .....	353
Schering Corporation .....	355
Searle, G. D., & Co. ....	351
Smith-Dorsey Company .....	361
Smith, Kline & French Labs. ....	331
Stokes Sanitarium .....	386
U. S. Brewers Foundation, Inc. ....	373
U. S. Savings Bond .....	378
Wallace Sanitarium .....	326
White Laboratories, Inc. ....	Insert
Winthrop-Stearns, Inc. ....	323
Worrell, Dorothy .....	386
Wyeth, Inc. ....	327
Zemmer Company .....	332



*Your* **LABORATORIES**  
*Our* **RESPONSIBILITY**

CLINICAL PATHOLOGY  
PATHOLOGIC ANATOMY

**DUNCAN LABORATORIES**

*Established 1924*

909 Argyle Bldg. **KANSAS CITY 6, MO.**

230 Frisco Bldg. **JOPLIN, MISSOURI**

RALPH EMERSON DUNCAN, M.D.

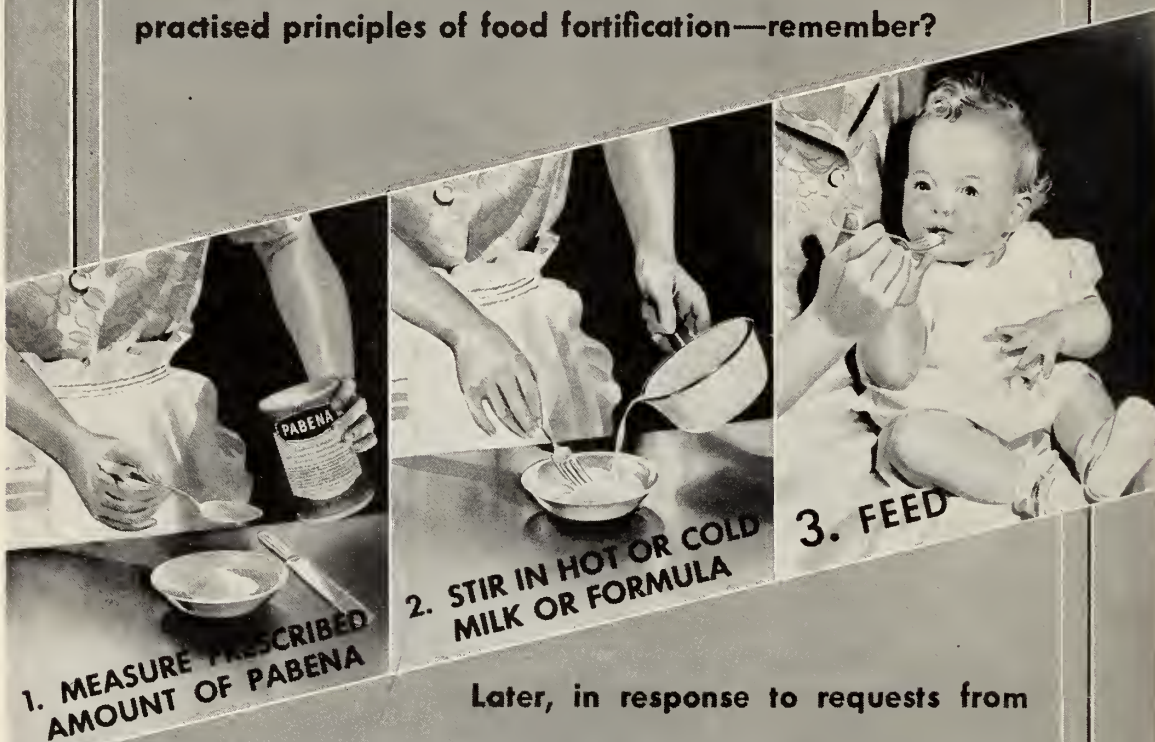
MAURICE L. JONES, M.D.

In addition to diagnostic laboratory services, chemically accurate and clinically tested reagents, solutions, stains and culture media are available for immediate delivery.

# Remember

in 1932 we brought out Pablum?\*

Embodying a new concept of cereal nutrition, easy of preparation, nonwasteful, forerunner of present day widely practised principles of food fortification—remember?



Later, in response to requests from physicians, we went a step further in Pabena,\* similar in nutritional and convenient features to its father-product, Pablum, different in flavor because of its oatmeal base. If our pioneer work and ethical policy meet with your approbation, remember, please, to specify Pablum and Pabena.

\*"Pablum" and "Pabena" are the registered trademarks of Mead Johnson & Company for these vitamin-and-mineral-enriched mixed cereal foods.

*Mead Johnson & Company, Evansville, Indiana, U. S. A.*



# THE JOURNAL

*of the*  
MISSOURI STATE MEDICAL ASSOCIATION

VOLUME 46  
NUMBER 6

JUNE, 1949

SINGLE COPY, 40 CENTS  
PER YEAR, \$3.00

## ORIGINAL ARTICLES

Ectopic Pregnancy

Dermatitis of the Hands

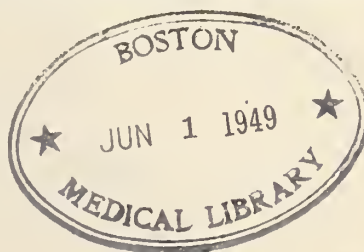
Polyarteritis Nodosa

The Need of Belonging in War and Peace: Its Effect  
on Delinquency

Primary Atypical Pneumonia Treated With Aureomycin\*

Carcinoma of the Colon and Rectum

Practical Aspects of the Diet in Pregnancy



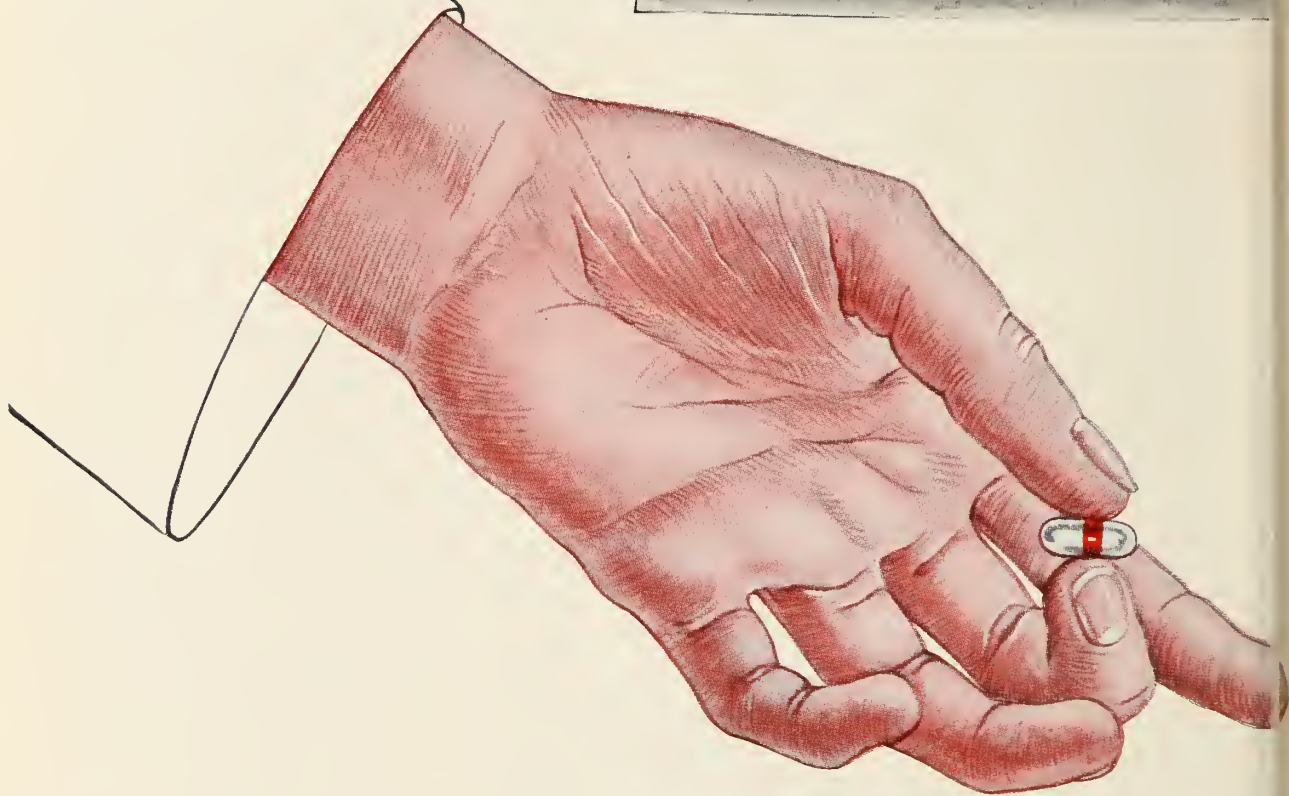
## EDITORIALS

A. M. A. Assessment

Death Rates in 1948

(Contents Index Page 393)

*of distinct*



DILANTIN Sodium (diphenylhydantoin sodium, P. D. & Co.) is available in 0.03 Gm. ( $\frac{1}{2}$  gr.) and 0.1 Gm. ( $1\frac{1}{2}$  gr.) Kapseals®, in bottles of 100 and 1000.

\*Magladery, J.: Therapeutic Conference, The Treatment of Epilepsy.  
Bull. Johns Hopkins Hosp., 82:609, (June) 1948.

P A R K E, D A V I S & C O M P A N Y



*advantage in epilepsy*

**DILANTIN<sup>®</sup>**

“It has the distinct advantage of being unassociated with mental clouding or drowsiness.”\* DILANTIN, highly effective in suppressing grand mal seizures, is notably free from hypnotic side-effects thus facilitating the educational, vocational and social rehabilitation of the epileptic patient.

Absence or great diminution in frequency and severity of attacks is achieved with individualized dosage schedules.

DETROIT 32, MICHIGAN





The national total of undiagnosed or "unknown" diabetics may run from a million to two or even three.<sup>1,2</sup> Modern treatment, when promptly initiated, can do much to prevent metabolic decompensation and to minimize diabetic complications. Therefore, the clinical revealment of diabetes mellitus at an early stage is essential.

Thus, "all patients who present themselves to the physician for an examination should have a routine urine examination."<sup>3</sup> In this phase of practice, the advantages of *Clinitest*® tablets for urine-sugar analysis are considerable.

*Clinitest* is dependably accurate, yet it takes only a few seconds to perform. The test is simple—no external heat need be applied; interpretation is by direct color comparison. *Clinitest* is convenient both for the doctor's office routine and for the diabetic patient's prescribed sugar-level checkups.

(1) Joslin, E. P.: *Postgraduate Med.* 4:302 (Oct.) 1948. (2) Kemper, C. F.: *Rocky Mountain M. J.* 45:1092 (Dec.) 1948. (3) Pollack, H.: *New York Med.* 4:15 (Dec. 5) 1948.



# Clinitest

for urine-sugar analysis

AMES COMPANY, INC. • ELKHART, INDIANA



## CONTENTS

Ectopic Pregnancy. William H. Masters, M.D., St. Louis .....	405	President's Page .....	434
Dermatitis of the Hands. Richard L. Sutton, Jr., M.D., Kansas City, Mo. ....	410	Editorials—	
Polyarteritis Nodosa. Robert M. Brooker, M.D., St. Joseph, Mo. ....	414	A. M. A. Assessment .....	435
The Need of Belonging in War and Peace: Its Effect on Delinquency. Nathan Blackman, M.D., St. Louis .....	417	Death Rates in 1948 .....	435
Primary Atypical Pneumonia Treated With Aureomycin. Michael Bernreiter, M.D., and Joseph M. Holthaus, M.D., Kansas City, Mo. ....	420	News Notes .....	435
Carcinoma of the Colon and Rectum. Everett D. Sugarbaker, M.D., Jefferson City, Mo. ....	421	Musings of the Field Secretary .....	436
Practical Aspects of the Diet in Pregnancy. R. Ned White, M.D., Springfield, Mo. ....	430	Organization Activities .....	436
		Miscellany .....	440
		Tuberculosis Abstract .....	444
		Deaths .....	446
		Society Proceedings .....	448
		Book Review .....	450
		Commercial Announcements .....	458

Entered as Second-Class Matter, February 18, 1925, at the Post Office at Fulton, Mo., under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1003, Act of October 3, 1917, authorized July 30, 1918. Business Office, 1201-5 Bluff St., Fulton, Mo., and 623 Missouri Building, St. Louis, Mo., Editorial Office, 623 Missouri Building, St. Louis, Mo. Return postage guaranteed. Printed by The Ovid Bell Press, Inc., Fulton, Mo.

# THE MAJOR CLINIC ASSOCIATION

3100 Euclid Avenue, Kansas City, Missouri

A Well  
Equipped  
Institution  
for the  
Treatment of  
Nervous and  
Mental  
Diseases and  
Alcohol  
Drug and  
Tobacco  
Addictions



Beautiful  
Location  
Large, Well  
Shaded  
Grounds,  
Spacious  
Porches,  
All Modern  
Methods for  
Restoring  
Patients to a  
Normal  
Condition

HERMON S. MAJOR, M.D.  
Medical Director

HERMON S. MAJOR, JR.  
Business Manager

**AMERICAN MEDICAL ASSOCIATION**

President, Roscoe L. Sensenich, South Bend, Ind.  
President-Elect, Ernest Edward Irons, Chicago.

Annual Session, Atlantic City, June 6-10, 1949

**MISSOURI STATE MEDICAL ASSOCIATION**

92nd Annual Session, St. Louis, March 26-29, 1950

President, Wallis Smith, Springfield.  
President-Elect, W. A. Bloom, Fayette.  
Vice Presidents, J. C. Creech, Troy; E. J. McIntire, Carthage;  
H. M. Henrickson, Popular Bluff.  
Speaker, F. T. H'Doubler, Springfield; Vice Speaker, Victor E. Scherman, St. Louis.  
Treasurer, C. E. Hyndman, St. Louis.  
Secretary, H. E. Petersen, St. Joseph.  
Editor, R. O. Muether, St. Louis.  
Secretary-Editor Emeritus, R. L. Thompson, St. Louis.  
Field Secretary, Raymond McIntyre, St. Louis.  
Assistant Editor-Business Manager, Helen Penn, St. Louis.  
Executive Secretary, Tom R. O'Brien, 623 Missouri Bldg., St. Louis.

**Delegates to the American Medical Association**

R. E. Schlueter, St. Louis, 1949-51; alternate, F. G. Pernoud, St. Louis. James R. McVay, Kansas City, 1949-1951; alternate, R. B. Wray, Nevada. W. L. Allee, Eldon, 1948-50; alternate, Paul Baldwin, Kennett. Howard B. Goodrich, Hannibal, 1948-1950.

**Standing Committees**

**Scientific Work**—A. N. Arneson, St. Louis, Chairman (1951); Victor B. Buhler, Kansas City (1952); H. E. Petersen, St. Joseph.

**Postgraduate Course**—M. Pinson Neal, Columbia, Chairman (1952); Carl R. Ferris, Kansas City (1952); Raymond O. Muether, St. Louis (1951); Edward Massie, St. Louis (1951); Guy D. Callaway, Springfield (1950). **Associate Members**—W. W. Tillman, Bolivar; Kenneth Glover, Mount Vernon; Paul O. Hagemann, St. Louis; D. L. Sexton, St. Louis.

**Publication**—R. O. Muether, St. Louis, Chairman; V. T. Williams, Kansas City; H. E. Petersen, St. Joseph; M. D. Overholser, Columbia; Paul O. Hagemann, St. Louis.

**Public Policy and Public Relations**—Armand D. Fries, St. Louis, Chairman (1952); J. W. Allee, Columbia (1950); F. R. Crouch, Farmington (1951); Howard B. Goodrich, Hannibal (1951); John Growdon, Kansas City (1950). **Associate Member**—Cyril W. Schumacher, St. Louis.

**Defense**—Charles E. Hyndman, St. Louis, Chairman (1951); Roland S. Kieffer, St. Louis (1950); L. F. Heimburger, Springfield (1950); O. B. Zeinert, St. Louis (1952); L. P. Forgrave (1952).

**Medical Education and Hospitals**—John S. Knight, Kansas City, Chairman (1951); F. T. H'Doubler, Springfield (1950); O. J. Gibson, Cape Girardeau (1952); D. M. Dowell, Chillicothe (1950); Oliver Abel, St. Louis (1952).

**Cancer**—E. C. Ernst, St. Louis, Chairman (1950); E. Kip Robinson, Kansas City (1951); Everett Sugarbaker, Jefferson City (1951); William E. Leighton, St. Louis (1952); Marvin Napper, Springfield (1952).

**Medical Economics**—Carl F. Vohs, St. Louis, Chairman (1950); Morris S. Harless, Kansas City (1951); C. T. Herbert, Cape Girardeau (1951); G. A. Alken, Marshall (1952); A. P. Rowlette, Moberly (1952).

**Mental Health**—E. F. Hctor, Farmington, Chairman (1951); Paul Hines, St. Louis (1950); Orr Mullinax, Jefferson City (1950); B. Landis Elliott, Kansas City (1952); Frank M. Grogan, St. Louis (1952).

**Maternal Welfare**—E. Lee Dorsett, St. Louis, Chairman (1952); Leo Hartnett, St. Louis (1952); J. L. Johnston, Springfield (1951); E. E. Wadlow, St. Joseph (1950); J. Milton Singleton, Kansas City (1950).

**Infant Care**—G. V. Herrman, Kansas City, Chairman (1951); Eugene Schwartz, Springfield (1951); H. E. Petersen, St. Joseph (1950); Peter G. Danis, St. Louis (1952); Park J. White, St. Louis (1952). **Associate Members**—Joseph C. Jaudon, St. Louis; Daniel B. Landau, Hannibal.

**Health and Public Instruction (McAlester Foundation)**—A. W. McAlester, III, Kansas City, Chairman (1950); M. K. Underwood, Rolla (1951); B. E. DeTar, Joplin (1951); Joseph Conrad, Chillicothe (1950); J. Earl Smith, St. Louis (1952).

**Constitution and By-Laws**—B. Landis Elliott, Kansas City, Chairman (1950); J. H. Summers, Lebanon (1951); John J. Hammond, St. Louis (1950); W. Logan Allee, Eldon (1952); H. O. Loyd, Jefferson City (1952).

Year indicates expiration of term.

**Fractures**—Daniel L. Yancey, Springfield, Chairman (1952); W. J. Stewart, Columbia (1951); N. S. Pickard, Kansas City (1951); W. R. Bohne, St. Louis (1950); J. Albert Key, St. Louis (1950). **Associate Members**—Jacob Kulowski, St. Joseph; B. L. Murphy, Hannibal.

**Conservation of Eyesight**—C. Souter Smith, Springfield, Chairman (1952); Robert Mattis, St. Louis (1951); A. N. LeMoine, Kansas City (1950); C. P. Dyer, St. Louis (1950); Robert S. Minton, St. Joseph (1952). **Associate Members**—Winfred L. Post, Joplin; Philip Luedde, St. Louis; John McLeod, Kansas City; G. J. Tygett, Cape Girardeau; S. L. Freeman, Kirksville; H. B. Stauffer, Jefferson City; E. D. Tenaglia, St. Louis.

**Control of Venereal Disease**—A. W. Neilson, St. Louis, Chairman (1952); W. S. Sewell, Springfield (1951); Charles Greenberg, St. Joseph (1950); Hugh L. Dwyer, Kansas City (1950); E. M. Cannon, St. Louis (1952).

**Industrial Health**—V. T. Williams, Kansas City, Chairman (1951); Horace F. Flanders, Kansas City (1951); E. M. Fessenden, St. Louis (1950); A. M. Ziegler, Kansas City (1952); R. A. Sutter, St. Louis (1952). **Associate Members**—R. Emmet Kelly, St. Louis; H. M. Roebber, Bonne Terre.

**Special Committees**

**Physical Medicine**—F. Garrett Pipkin, Kansas City, Chairman (1951); Emmett Settle, Rock Port (1950); Luke A. Knese, St. Louis (1950); A. J. Kotkis, St. Louis (1952); J. L. Washburn, Versailles (1952).

**Tuberculosis**—E. E. Glenn, Springfield, Chairman; Lawrence E. Wood, Kansas City; J. L. Mudd, St. Louis; Paul Murphy, St. Louis; C. A. Brashear, Mount Vernon; W. P. McDonald, St. Joseph; I. J. Flance, St. Louis; Florence E. MacInnis, Kansas City.

**Study of Cardiac Diseases**—A. Graham Asher, Kansas City, Chairman (1952); Drew Luten, St. Louis (1951); A. M. Estes, Jackson (1951); Julius Jensen, St. Louis (1950); Glenn W. Hendren, Liberty (1952). **Associate Members**—Horace W. Carle, St. Joseph; J. W. Fleming, Moberly; C. B. Davis, Nevada; Arthur Strauss, St. Louis; William I. Park, Springfield.

**Rural Medical Service**—R. W. Kennedy, Marshall, Chairman; A. E. Spelman, Smithville; J. W. Well, Palmyra; Martin M. Hart, Salem; R. B. Wray, Nevada.

**COUNCILOR DISTRICTS AND COUNTIES IN EACH DISTRICT\***

J. W. THOMPSON, St. Louis, Chairman

E. C. BOHRER, West Plains, Vice Chairman

**First District:** Councilor, Donald M. Dowell, Chillicothe. Counties: Andrew, Atchison, Buchanan, Caldwell, Carroll, Clay, Clinton, Daviess, De Kalb, Gentry, Grundy, Harrison, Holt, Livingston, Mercer, Nodaway, Platte, Ray, Worth.

**Second District:** Councilor, W. F. Francka, Hannibal. Counties: Adair, Chariton, Clark, Knox, Lewis, Linn, Macon, Marion, Monroe, Pike, Putnam, Ralls, Randolph, Schuyler, Scotland, Shelby, Sullivan.

**Third District:** Councilor, J. William Thompson, St. Louis: St. Louis City.

**Fourth District:** Councilor, Otto W. Koch, Clayton. Counties: Franklin, Jefferson, Lincoln, St. Charles, St. Louis County, Warren.

**Fifth District:** Councilor, J. F. Jolley, Mexico. Counties: Audrain, Boone, Callaway, Camden, Cole, Cooper, Gasconade, Howard, Maries, Miller, Moniteau, Montgomery, Morgan, Osage.

**Sixth District:** Councilor, R. W. Kennedy, Marshall. Counties: Bates, Benton, Cass, Cedar, Henry, Johnson, Lafayette, Pettis, St. Clair, Saline, Vernon.

**Seventh District:** Councilor, Edgar C. Virden, Kansas City. County: Jackson.

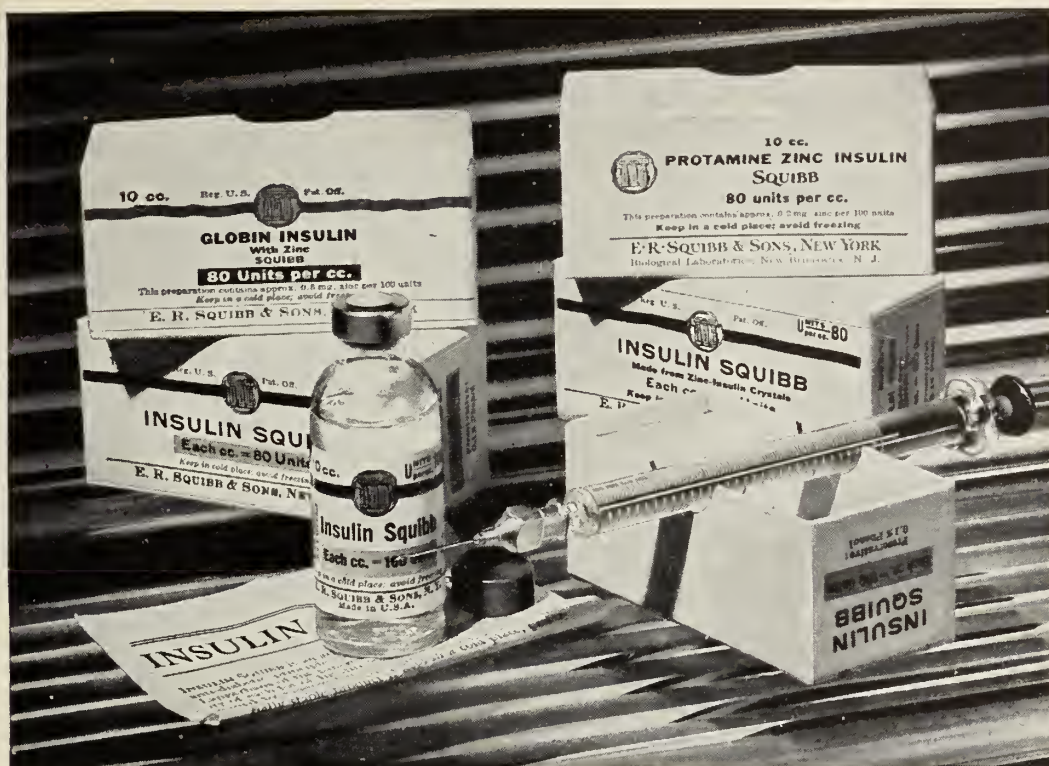
**Eighth District:** Councilor, W. S. Sewell, Springfield. Counties: Barry, Barton, Christian, Dade, Dallas, Greene, Hickory, Jasper, Lawrence, McDonald, Newton, Polk, Stone, Taney, Webster.

**Ninth District:** Councilor, E. Claude Bohrer, West Plains. Counties: Carter, Crawford, Dent, Douglas, Howell, Laclede, Oregon, Ozark, Phelps, Pulaski, Ripley, Shannon, Texas, Wright.

**Tenth District:** Councilor, Frank W. Hall, Cape Girardeau. Counties: Bollinger, Butler, Cape Girardeau, Dunklin, Iron, Madison, Mississippi, New Madrid, Pemiscott, Perry, Reynolds, St. Francois, Ste. Genevieve, Scott, Stoddard, Washington, Wayne.

Counties in italics are not organized.





## SQUIBB INSULIN PRODUCTS

*...purified...potent...rigidly standardized to meet the various requirements of diabetics.*

**short action:** peak effect within 3 to 4 hours, waning rapidly

INSULIN SQUIBB

10-cc. vials (40, 80 & 100 units per cc.)

INSULIN MADE FROM ZINC-INSULIN  
CRYSTALS SQUIBB

10-cc. vials (40 & 80 units per cc.)

**intermediate action:** peak effect in 8 to 12 hours, with action continuing sometimes for 16 or more hours.

GLOBIN INSULIN WITH ZINC SQUIBB

10-cc. vials (40 & 80 units per cc.)

**prolonged action:** onset slow; peak effect in 10 to 12 hours, with action sometimes persisting for 24 or more hours.

PROTAMINE ZINC INSULIN SQUIBB

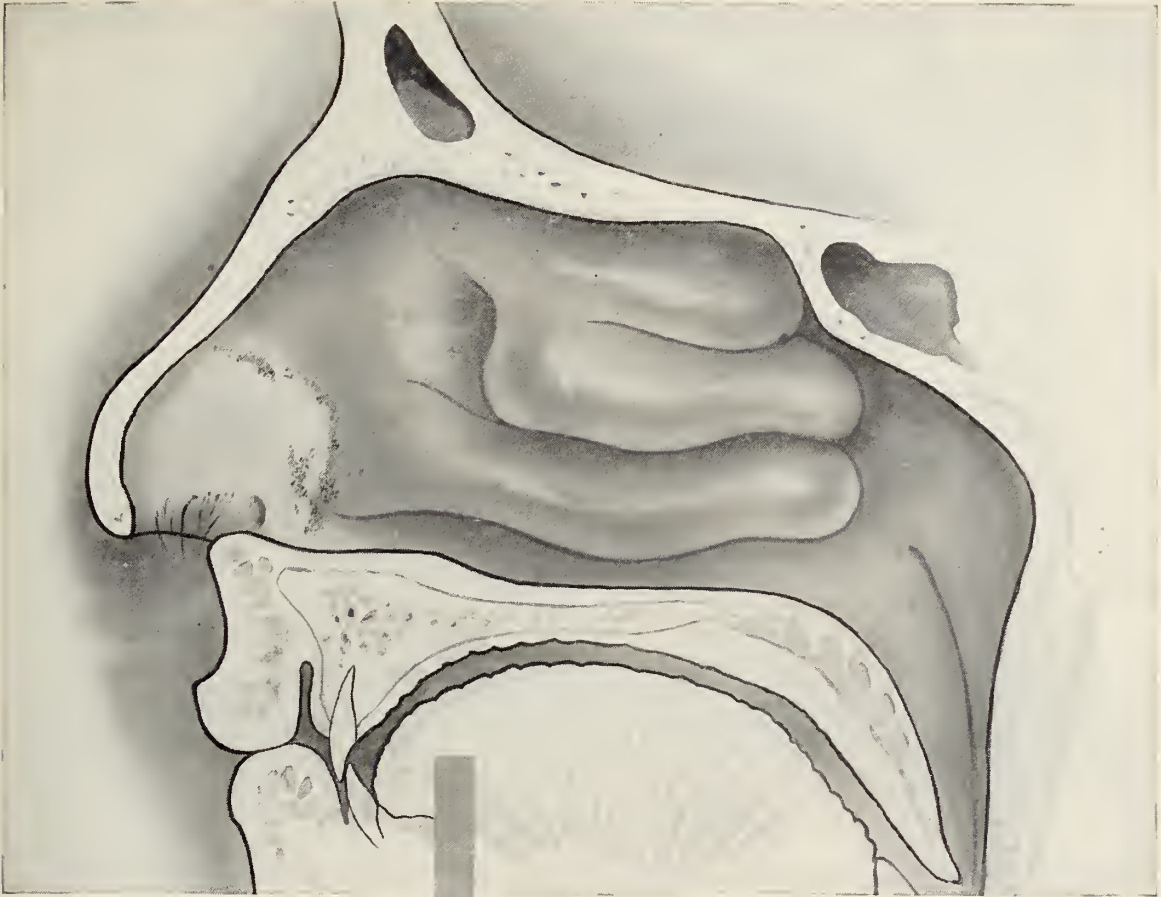
10-cc. vials (40 & 80 units per cc.)

**SQUIBB** MANUFACTURING CHEMISTS TO THE MEDICAL PROFESSION SINCE 1858

# County Societies in Affiliation with the Missouri State Medical Association

COUNTY	DISTRICT	PRESIDENT	ADDRESS	SECRETARY	ADDRESS
Andrew	1	V. R. Wilson	Rosendale	M. L. Holliday	Fillmore
Audrain	5	Glen P. Kallenbach	Mexico	Fred Griffin	Mexico
Barton-Dade	8	Rudolf Knapp	Golden City	Vern T. Bickel	Lamar
Bates	6			John M. Cooper	Butler
Benton	6	T. S. Reser	Cole Camp	James A. Logan	Warsaw
Boone	5	James Baker	Columbia	Helen Yeager	Columbia
Buchanan	1	O. Earl Whitsell	St. Joseph	Joseph L. Fisher	St. Joseph
Butler	10	Frank E. Dinelli	Poplar Bluff	J. W. McPheeters, Jr.	Poplar Bluff
Caldwell-Livingston	1	Virgil D. Vandiver	Chillicothe	Charles M. Grace	Chillicothe
Callaway	5	R. B. Price	Fulton	R. N. Crews	Fulton
Camden	5	E. G. Claiborne	Camdenton	G. T. Myers	Macks Creek
Cape Girardeau	10	O. J. Gibson	Cape Girardeau	Charles F. Wilson	Cape Girardeau
Carroll	1	J. Morris Atwood	Carrollton	John H. Platz	Carrollton
Carter-Shannon	9			W. T. Eudy	Eminence
Cass	6	Herbert A. Tracy	Belton	O. B. Barger	Harrisonville
Chariton-Macon-Monroe-Randolph	2	D. E. Eggleston	Macon	Henry K. Baker	Moberly
Clay	1	W. H. Goodson	Liberty	S. R. McCracken	Excelsior Springs
Clinton	1	Ronald E. Wilbur	Cameron	F. A. Santner	Lathrop
Cole	5	H. M. Wiley	Jefferson City	J. Paul Leslie	Jefferson City
Cooper	5			J. C. Tinch	Boonville
Dallas Hickory-Polk	8	C. H. Barnett	Bolivar	John R. O'Brien	Bolivar
De Kalb	1			W. S. Gale	Osborn
Dunklin	10	Quinton Tarver	Kennett	E. L. Spence	Kennett
Franklin	4	Herbert H. Schmidt	Marthasville	F. G. Mays	Washington
Greene	8	Daniel L. Yancey	Springfield	Kenneth E. Knabb	Springfield
Grundy-Daviess	1	Joseph M. Quisito	Trenton	E. A. Duffy	Trenton
Harrison	1	Merriam Gearhart	Bethany	W. A. Broyles	Bethany
Henry	6	S. B. Hughes	Clinton	R. S. Hollingsworth	Clinton
Holt	1	F. E. Hogan	Mound City	D. C. Perry	Mound City
Howard	5	Morris Leech	Fayette	Francis D. Dean	Fayette
Jackson	7	A. N. Altringer	Kansas City	Kenneth E. Cox	Kansas City
Jasper	8	Otto T. Blanke	Joplin	E. H. Hamilton	Joplin
Jefferson	4	Robert H. Donnell	Crystal City	George Hopson	DeSoto
Johnson	6	O. H. Damron	Warrensburg	Reed T. Maxson	Warrensburg
Laclede	9	H. W. Carrington	Lebanon	B. B. Hurst	Lebanon
Lafayette	6	Douglas Kelling	Waverly	Jordan Kelling	Waverly
Lewis-Clark-Scotland	2	J. R. Bridges	Kahoka	P. W. Jennings	Canton
Lincoln	4	H. S. Harris	Troy	J. C. Creech	Troy
Linn	2	Roy R. Haley	Brookfield	J. R. Dixon	Brookfield
Marion-Ralls	2	H. L. Greene	Hannibal	M. J. Roller	Hannibal
Mercer	1	T. S. Duff	Cainsville	J. M. Perry	Princeton
Miller	5			Carl T. Buehler, Jr.	Eldon
Mississippi	10	G. W. Whitaker	East Prairie	E. C. Rolwing	Charleston
Moniteau	5	K. S. Latham	California	L. L. Latham	California
Montgomery	5	E. J. T. Anderson	Montgomery City	S. J. Byland	Wellsville
Morgan	5	A. J. Gunn	Versailles	J. L. Washburn	Versailles
New Madrid	10	L. J. Smith	New Madrid	H. W. Carter	Portageville
Newton	8	H. C. Lentz	Neosho	J. A. Guthrie	Neosho
Nodaway-Atchison-Gentry-Worth	1	Frank H. Rose	Albany	Charles D. Humberd	Barnard
North Central Counties Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam)	2	Spencer L. Freeman	Kirksville	John B. Jones	Kirksville
Ozarks Medical Society (Barry-Lawrence-Stone-Christian-Taney)	8	Fred Wommack	Crane	Kenneth Glover	Mt. Vernon
Pemiscot	10	E. L. Taylor	Steele	C. F. Cain	Caruthersville
Perry	10	J. J. Bredall	Perryville	L. W. Feltz	Perryville
Pettis	6	E. L. Rhodes	Sedalia	Carl D. Siegel	Sedalia
Phelps-Crawford-Dent-Fulaski	9	A. A. Drake	Rolla	M. K. Underwood	Rolla
Pike	2	Eugene Barrymore	Bowling Green	Charles H. Lewellen	Louisiana
Platte	1	L. C. Calvert	Weston	E. K. Langford	Platte City
Ray	1	L. D. Greene	Richmond		
St. Charles	4	J. M. Jenkins	St. Charles	Calvin Clay	St. Charles
St. Francois-Iron-Madison-Washington-Reynolds	10	George L. Watkins	Farmington	Marvin T. Haw, Jr.	Bonne Terre
St. Genevieve	10	A. E. Sexauer	St. Genevieve	R. W. Lanning	St. Genevieve
St. Louis City	3	J. W. Thompson	St. Louis	S. J. Merenda	St. Louis
St. Louis	4	Paul R. Whitener	St. Louis	Robert C. Kingsland	St. Louis
Saline	6	James A. Reid	Marshall	Charles A. Veatch	Marshall
Scott	10	W. C. Critchlow	Sikeston	W. J. Ferguson	Sikeston
Shelby	2	D. L. Harlan	Clarence		
South Central Counties Medical Societies (Howell-Oregon-Texas-Wright-Douglas)	9	Garrett S. Hogg, Jr.	Cabool	A. C. Ames	Mountain Grove
Stoddard	10	H. A. Harris	Bloomfield	W. C. Dieckman	Dexter
Vernon-Cedar	6	William H. Allen	Nevada	Rolla B. Wray	Nevada
Webster	8	C. R. Macdonnell	Marshfield	E. G. Beers	Seymour





ciliary  
activity in  
**COLDS  
SINUSITIS  
HAY FEVER**

Ciliary motion carries away exudative debris in the upper respiratory passages. This action should not be inhibited by therapy of the common cold, sinusitis or hay fever.

The isotonic solutions of Neo-Synephrine hydrochloride permit ciliary function to continue in an efficient manner, while congestion is reduced by vasoconstriction.

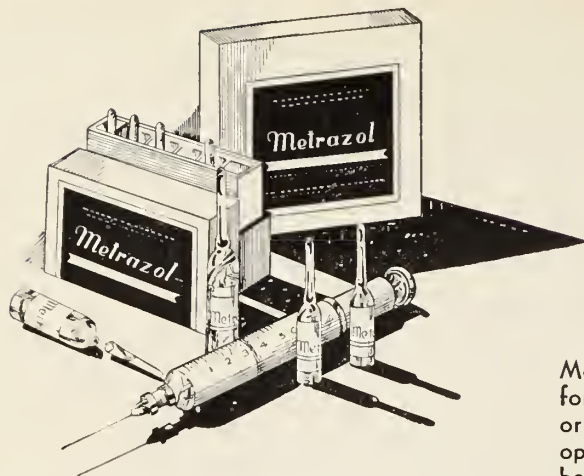


**NEO-SYNEPHRINE<sup>®</sup>**  
**HYDROCHLORIDE**

BRAND OF PHENYLEPHRINE HYDROCHLORIDE

Supplied in  $\frac{1}{4}\%$  solution (plain and aromatic), 1 oz. bottles. Also, 1% solution (when greater concentration is required), 1 oz. bottles, and  $\frac{1}{2}\%$  water soluble jelly,  $\frac{5}{8}$  oz.

*Winthrop-Stearns* INC.  
NEW YORK 13, N. Y. WINDSOR, ONT.



Metrazol, pentamethylentetrazol  
Ampules, 1 cc. and 3 cc.  
Sterile Solution, 30 cc. vials  
Tablets and Powder

# Metrazol

COUNCIL ACCEPTED

A DEPENDABLE, QUICK-ACTING  
CEREBRAL AND MEDULLARY  
STIMULANT

Metrazol is indicated for narcotic depression, for instance, in poisoning with barbiturates or opiates, in acute alcoholism and during the operation and postoperatively when respiration becomes inadequate because of medullary depression due to the anesthetic.

Inject 3 cc. Metrazol intravenously, repeat if necessary, and continue with 1 or 2 cc. intramuscularly as required.

**Bilhuber-Knoll Corp. Orange, N. J.**



## THE WALLACE SANITARIUM

MEMPHIS, TENNESSEE

*For the Diagnosis and Treatment of  
Nervous and Mental Diseases, Drug Addiction and Alcoholism*



# A safe way of treating tinea pedis...

Use Sopronol, hundreds and hundreds of case histories suggest.

Sopronol is physiologic. It utilizes the fatty acids found in human sweat (propionates and caprylates) to combat fungi just as nature does.

And because of this, Sopronol heals effectively and safely. Is virtually non-irritating, non-sensitizing, non-keratolytic.

Fight fungi physiologically ... with Sopronol.

## SOPRONOL<sup>®</sup>

IMPROVED

Propionate-Caprylate Compound



### ointment

Sodium propionate	12.3%
Propionic acid	2.7%
Sodium caprylate	10.0%
Zinc caprylate	5.0%
Diethyl sodium sulfonate	0.1%
Inert ingredients	69.9%
Including n-Propyl Alcohol	10.0%
1 oz. tubes	

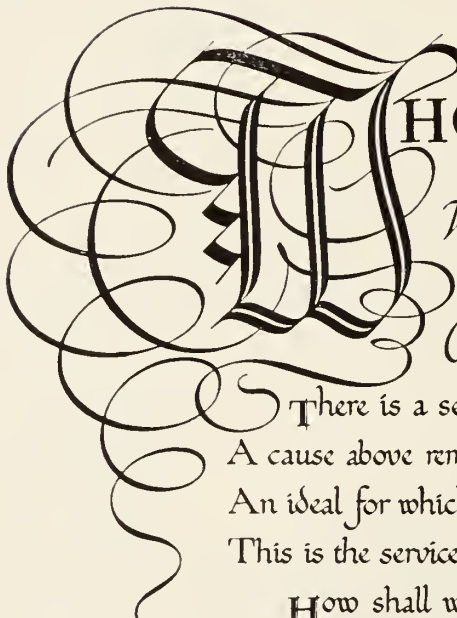
### POWDER

Calcium propionate	15.0%
Zinc propionate	5.0%
Zinc caprylate	5.0%
Inert ingredients	75.0%
2 and 5 oz. canisters	

### LIQUID

Sodium propionate	12.3%
Propionic acid	2.7%
Sodium caprylate	10.0%
Diethyl sodium sulfonate	0.1%
Inert ingredients	74.9%
Including n-Propyl Alcohol	12.5%
2 oz. bottles	

## IN TRIBUTE TO THE

...*"for services*

**W**HO shall measure devotion, or put a price  
on sacrifice?  
Who shall assess the long war against  
the power of Death?  
Or set a sum upon the gift of Life?

There is a service beyond the measure of a fee.

A cause above remuneration.

An ideal for which there is no price.

This is the service...the cause...the ideal...of the American doctor.

**H**ow shall we reckon it, and by what formulae?

How much for the laughter of a little child rescued out of crisis?

What's the cost of discouragement?

Who can pay for a sleepless night?

Name the price of a cure!



## AMERICAN DOCTOR

*rendered..."*

There is no algebra for it, no scribble of figures, no proper value.  
For this is a service as large as life, and as manifold.

It is a soldier crying in agony on a thousand battlefields.

It is the terrible word "Why?" under the surgeon's probe.

It is the end of pain.

It is Hope.

It is the lonely, unending quest for knowledge.

It is the fight against ignorance, sloth, superstition.

It is the dumb, unspeakable joy in the eyes of a parent.

It is the rock of grief.

It is cold rain and pounding storm and bone-weariness and the  
new-born babe gasping its first breath in the grey dawn.

It is all this, and the quiet glory of the job done,  
Dedicated to service—in the name of Mercy  
And the common brotherhood of man.

PHILIP MORRIS & COMPANY

✦ PHILIP MORRIS will be happy to send you a handsomely printed and illuminated copy of this  
tribute, suitable for framing. Please make your request on your professional stationery.  
Address Research Dept., PHILIP MORRIS & CO., LTD., INC. 119 Fifth Ave., New York 3, N. Y.

# 50 and 2

## YEARS TREATING ALCOHOL AND DRUG ADDICTION

In 1897 Doctor B. B. Ralph developed methods of treating alcohol and narcotic addiction that, by the standards of the time, were conspicuous for success.

Twenty-five years ago experience had bettered the methods. Today with the advantages of collateral medicine, treatment is markedly further improved.

The Ralph Sanitarium provides personalized care in a quiet, homelike atmosphere. Dietetics, hydrotherapy and massage speed physical and emotional re-education. Co-operation with referring physicians. Write or phone.

*The*  
**RALPH**  
**SANITARIUM**  
*Established 1897*

Ralph Emerson Duncan, M.D.  
DIRECTOR



**529 HIGHLAND AVENUE • KANSAS CITY 6, MISSOURI**

Telephone Vltor 3624



# Optimal Nutrition



## SO VITAL FOR OPTIMAL HEALTH

In the achievement and maintenance of optimal health, no other single influence looms so vital as sound nutrition. In fact, so important is this principle to preventive medicine that *optimal nutrition* has become the basis of all modern day health programs.

When nutritional health is threatened, as in dietary restrictions often imposed by disease, or during convalescence, or when the nutrient intake is insufficient because of other reasons, the *multiple dietary supplement* Ovaltine

in milk is especially useful for overcoming nutrient deficiencies of the diet.

Three glassfuls daily may readily supplement even poor diets to adequacy. Easy digestibility makes its many valuable nutrients—vitamins, minerals, biologically complete protein, and food energy—quickly available. The pleasing flavor adds to its wide applicability and usefulness.

The table below gives the amounts of nutrients in three glassfuls of Ovaltine in milk.

THE WANDER COMPANY, 360 N. MICHIGAN AVE., CHICAGO 1, ILL.



# Ovaltine

Three servings daily of Ovaltine, each made of ½ oz. of Ovaltine and 8 oz. of whole milk,\* provide:

CALORIES	676	VITAMIN A	3000 I.U.
PROTEIN	32 Gm.	VITAMIN B <sub>1</sub>	1.16 mg.
FAT	32 Gm.	RIBOFLAVIN	2.0 mg.
CARBOHYDRATE	65 Gm.	NIACIN	6.8 mg.
CALCIUM	1.12 Gm.	VITAMIN C	30.0 mg.
PHOSPHORUS	0.94 Gm.	VITAMIN D	417 I.U.
IRON	12 mg.	COPPER	0.5 mg.

\*Based on average reported values for milk.

Two kinds, Plain and Chocolate Flavored. Serving for serving, they are virtually identical in nutritional content.





## COSMETIC HAY FEVER?

### Prescribe UNSCENTED AR-EX Cosmetics

Recent clinical tests showed many cases of cosmetic sensitivity, but not a single one to UNSCENTED AR-EX Cosmetics. For allergic patients, prescribe UNSCENTED AR-EX Cosmetics—free from all known irritants and allergens. SEND FOR FREE FORMULARY.

UNSCENTED



### FREE FORMULARY

DR. \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_

STATE \_\_\_\_\_

AR-EX COSMETICS, INC., 1036 W. VAN BUREN ST., CHICAGO 7, ILL.

## RADIUM (including Radium Applicators) FOR ALL MEDICAL PURPOSES

Est. 1919

### QUINCY X-RAY & RADIUM LABORATORIES

(owned and directed by a Physician-Radiologist)

W. C. U. Bldg.

HAROLD SWANBERG, B.S., M.D., Director

QUINCY, ILLINOIS

## HAMILTON-SCHMIDT SURGICAL COMPANY

St. Louis, Missouri

[[ Surgical Instruments, Invalid and Sick Room Supplies ]]  
[[ Post-Operative Belts, Elastic Hosiery and Trusses Fitted ]]

Central 1680

REGISTERED NURSE IN ATTENDANCE 215 North Tenth Street

*for Fifty Years*

**PROFESSIONAL PROTECTION  
EXCLUSIVELY**

THE  
**MEDICAL PROTECTIVE COMPANY**  
FORT WAYNE, INDIANA

ST. LOUIS Office: A. W. Breckenkamp, Representative, 623 Missouri Theatre Building, Telephone Newstead 0404



# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies  
Issued Monthly under direction of the Publication Committee

COPYRIGHTED, 1949, BY MISSOURI STATE MEDICAL ASSOCIATION. ALL RIGHTS RESERVED.

VOLUME 46

JUNE, 1949

NUMBER 6

R. O. MUETHER, M.D., Editor  
HELEN PENN, Assistant Editor  
623 Missouri Bldg., St. Louis, Mo. Telephone, Newstead 0404-05

PUBLICATION  
COMMITTEE { R. O. MUETHER, M.D., Chairman  
V. T. WILLIAMS, M.D.  
H. E. PETERSEN, M.D.  
PAUL O. HAGEMANN, M.D.  
M. D. OVERHOLSER, M.D.

### ECTOPIC PREGNANCY

A REPORT OF 106 CASES

WILLIAM H. MASTERS, M.D., *St. Louis*

DURING A TEN year period ending January 1, 1948, there were 106 ectopic pregnancies, proven either at surgery or at autopsy, admitted to Barnes or St. Louis Maternity hospitals. The purpose of this paper is to evaluate the statistics accumulated from these admissions and to discuss in some detail experience gained in dealing with a proven instance of approximately eleven ectopic pregnancies every twelve months. It has been impossible to determine with accuracy how many times this diagnosis was one of major consideration in a patient's hospital admission, or the incidence of exploratory laparotomy with ectopic pregnancy as a primary diagnosis when the condition was not found to be present. The importance of repeated examination of long range statistics obtained on the subject of ectopic pregnancy is demonstrated by Fall's<sup>5</sup> report in 1938 which placed extrauterine pregnancy as the ninth largest cause of maternal death in the United States. Further importance is attached to the study of ectopic pregnancy in the light of Williams and Corbit's<sup>19</sup> recent analysis of 101 fatalities from ectopic pregnancy. These authors state that in the decade from 1931 to 1940 every eighteenth puerperal death in Philadelphia, every sixteenth puerperal death in New York and every twelfth puerperal death in Chicago during this period was due to ectopic gestation. Mortality rates within the last ten years have varied from 8 per cent reported by Ware and Winn,<sup>16</sup> 1941, to 0.34 per cent by Marchetti, et al.,<sup>9</sup> 1946, with Farrell and Scheffey<sup>6</sup> reporting an incidence of 3.2 per cent in 1943, which seems to be somewhat higher than the average. Ware and Winn<sup>17</sup> reported additional cases with a

gross mortality of 1.7 per cent in 1946. This reported series of 106 cases included two fatal terminations, a gross mortality rate of 1.9 per cent.

#### INCIDENCE

Ectopic gestation occurs once in every 250 to 300 pregnancies as noted by Titus<sup>15</sup> and Marchetti.<sup>9</sup> Standers<sup>14</sup> places the incidence a little lower at the level of one in 403 pregnancies in the New York Lying-in Hospital. Ware and Winn<sup>17</sup> describe the incidence as one in 70, although they qualify their stand by saying that they only admit complications of pregnancy to their service. Crossen and Crossen<sup>4</sup> state that 2 per cent of all gynecologic operations are for extrauterine pregnancy.

In 1922, Schumann<sup>11</sup> noted that 70 per cent of his cases of ectopic pregnancy occurred between the ages of 24 and 33 years inclusive. Marchetti<sup>9</sup> stated

Table 1. Age Incidence (1938 through 1947)		
Age (years)	Total No. Patients	Per Cent
15-20	3	2.8 )
21-25	15	14.2 )
26-30	41 )	38.7 )
31-35	33 )	31.1 )
36-40	13 )	12.3 )
41-45	1	0.9 )
	-74	-69.8
		-13.2

that ectopic gestation was found to occur most frequently in the age group ranging from 25 to 35. The statistics at Barnes Hospital tend to confirm these two observations (table 1). Seventy-four cases of ectopic gestation occurred between the ages of 26 and 35, an incidence of 69.8 per cent. The youngest patient in the series was 16 years of age and the oldest was 41. It is interesting to note that as many as fourteen cases occurred during or after the thirty-sixth year, an incidence of 13.2 per cent, as

From the Washington University School of Medicine, Department of Obstetrics and Gynecology; Barnes and St. Louis Maternity hospitals.

opposed to eighteen cases, or 16.9 per cent occurring before the age of 26. This almost equal distribution between the first ten and the last ten years of reproductive life is of unusual interest and a real warning that the incidence of ectopic pregnancy is far from negligible after the age of 35 years.

The race incidence in this series of ectopic pregnancies is contained in table 2. During the ten year period in question, there were ninety-four white

Table 2. Race Incidence		
Race	Total No. Patients	Per Cent
White	94	88.7
Colored	12	11.3

patients and twelve Negro patients in the series of 106 cases with the resultant percentages as noted. Sixty-five of the 106 patients were admitted under private care and forty-one were under ward supervision (table 3). This corresponds roughly with the average percentage of private and ward admissions during the ten year period in question.

Table 3. Distribution Into Ward and Private Care			
Service	No. Patients	Per Cent Dist. Ectopic Pregnancies	Per Cent Dist. Hospital Admissions Jan. 1938—Jan. 1948
Private	65	61.3	60.8
Ward	41	38.7	39.2

In the lower income groups, basically the ward service, where one might expect to find a higher incidence of pelvic infection, there was no significant increase statistically in the number of ectopic pregnancies over the ten year period.

The majority of the patients were primigravidas (table 4). If the twelve patients whose gravidity was never determined are eliminated temporarily from the series, thirty-nine of the remaining ninety-

Table 4. Gravidity Prior to Ectopic Gestation (Percentage is based on a total of 34 patients of known gravidity)		
Gravidity	No. of Patients	Per Cent
Zero	39	41.5
One	25	26.6
Two	20	21.3
Three or more	10	10.6
Unknown	12	

four, or a percentage of 41.5 had never previously been pregnant and twenty-five, or a percentage of 26.6 have had only one previous conception; so that 68.1 per cent of all of these cases of ectopic gestation were concentrated in those patients who had no more than one previous gestation.

#### ETIOLOGY

There are a variety of impediments which apparently are placed to obstruct the newly fertilized ovum as it follows its natural pathway from graffian follicle to uterine mucosa. The cause most frequently mentioned for ectopic gestation is that of previously acquired pelvic inflammation. The actual occurrence of prior pelvic infection is one of the most difficult clinical entities to establish clearly in many cases. A satisfactory history frequently is unobtainable, in part due to the patient's natural reticence and, in part, due to the patient's basic ignorance. It is possible the organism previously assigned the dominant role, the gonococcus, may well be losing its primary position as an influential agent. In recent years advances in antibiotic

therapy certainly have reduced significantly the complications of gonorrhea. In addition, acute gonorrheal salpingitis may be less important as an etiologic factor than has been thought by many because of its tendency to seal the tubes at the fimbriae. Abortions, induced or natural, postpartum endometritis and acute cervicitis and vaginitis may all play a part in reducing the motility or patency of the tubes. The physiologic progress of the fertilized ovum may be impeded by adhesions both within and without the tubal lumina as the result of a chronic or acute infection, whether by direct extension through the tubal mucosa, or as a result of a parametritis or even a pelvic peritonitis.

Transmigration of the ovum from one ovary to the opposite tube also has been reported frequently since this phenomenon was originally described by Sippel,<sup>13</sup> and publicized in this country by Williams.<sup>18</sup> In sixty of the 106 ectopic gestations (table 5) that are presented in this series there was no

Table 5. Position of Corpus Luteum Cyst in Relation to Involved Tube			
Position	No. of Patients	Per Cent	Pct. Positive Observation (46 cases)
Same Side	31	29.22	67.4
Opposite side	14	13.22	30.4
Not determined	60	56.60	
Not present	1	00.96	2.2

note by the operator, nor was the examination of the tissues removed by the Pathology Department sufficiently explicit to draw an absolute opinion concerning the relative position of the corpus luteum of pregnancy to the involved tube. This represented more than 50 per cent of the cases. However, in 44 per cent of the cases studied a definite answer was obtained. In one case careful examination did not demonstrate the corpus luteum of pregnancy in either ovary, and early involution was presumed to have occurred. If one confines himself to positive observation, fourteen out of a total of forty-six cases demonstrated the corpus luteum of pregnancy to be in the opposite ovary from the involved tube, an incidence of 30.4 per cent. Certainly an incidence of 30 per cent even in a small series is considerable and may be of significance. The possibility of a similar high incidence of transmigration in normal uterine pregnancy of course presents itself, though there is as yet no satisfactory information available on this point.

To a minor role in etiology must be consigned such nebulous factors as questionable isthmospasm, previous laparotomy (although Siegel<sup>12</sup> reported a 15 per cent incidence of previous laparotomy in his own proven cases), and the as yet unproven factor of defective germ plasm. Infantilism of the pelvic organs has been suggested as a possible source of defect in the migration of the egg together with congenital defects, such as accessory ostia or diverticula of the tube, which may account for early implantation as a result of excessive slowing of the normal progress of the fertilized ovum. Edward Allen<sup>1</sup> believes that extrauterine implantation is due most frequently to a profound defect in metabolism which is probably nutritional in character



and may in itself affect the pelvic transportation system by changes in pelvic physiology. This view is as yet unsubstantiated.

#### SYMPTOMS

Pain is the cardinal symptom in the clinical picture of ectopic gestation. The incidence of pain has been reported variously from 80 per cent by Ware,<sup>16</sup> to 98.5 per cent by Marchetti, et al.<sup>9</sup> A well known didactic statement frequently made by clinicians for teaching purposes is that without pain one does not have an ectopic pregnancy. Certainly there are exceptions to the cardinal rule of pain, but they are relatively few. In the series under consideration, the symptoms of pain has been divided into two groups (table 6). The first: severe pain includes all cases of severe lower abdominal distress, unilateral

Table 6. Pain in Ectopic Gestation

Type of Pain	No. of Patients	Per Cent
Severe	41	38.7
Cramping	59	55.7
None	6	5.6

or bilateral and the occasional concomitant onset of shoulder or neck pain. The symptoms of severe pain of this type occurred in forty-one of the 106 cases of proven ectopic pregnancy, for an incidence of 38.7 per cent. This sudden, sharp, stabbing type of pain was noted most frequently following straining, as during defecation, or subsequent to a rapid change of position such as rising from bed in the morning. The second type of pain; a crampy, menstrual type of vague lower abdominal distress was noted in fifty-nine cases, an incidence of 55.7 per cent. This crampy type of pain most frequently was described as having its onset in a dragging sensation in the lower pelvis and was accompanied usually by a nagging low backache. The onset of either severe or crampy pain was noted in a total of 94.4 per cent of all cases studied. Only six of the ectopic gestations, or 5.6 per cent, gave no positive history of pain or lower abdominal distress at any time during their clinical picture. These figures range similarly with those of Marchetti<sup>9</sup> in his reported incidence of 98.5 per cent.

Menstrual irregularity is certainly the second most common finding in the clinical picture of ectopic pregnancy. The typical history is one of a

Table 7. Menstrual Irregularities

Type of Disturbance	No. of Patients	Per Cent
Amenorrhea*	43	40.6
Intermenstrual bleeding	75	70.8
Amenorrhea + intermenstrual bleeding	33	31.1

\* At least one missed period

missed period followed two to three weeks later by the onset of vaginal spotting which continues off and on until such time as the onset of pelvic distress brings the patient to the doctor's office. While it is the safest procedure to associate the picture of at least a month's amenorrhea followed by subsequent spotting with the diagnosis of ectopic pregnancy, it will be noted (table 7) that this is the true circumstance in less than a third of the cases studied. Only 31.1 per cent of the cases exhibited a com-

bination of amenorrhea plus intermenstrual bleeding. Thus less than one-third of all the patients demonstrated the typical clinical picture of menstrual irregularity described by the textbooks for ectopic pregnancy. However, forty-three of the patients had at least one month's period of amenorrhea, the longest was a ten month period of amenorrhea in the one patient with a full term tubal pregnancy. This is an instance of 40.6 per cent. The average case showed only one completely missed period. There were seventy-five cases, or 70.8 per cent of those studied, that developed spotting, irregular bleeding or minor hemorrhages, all occurring during the course of the ectopic conception. As was previously noted, thirty-three of these seventy-five patients reported the onset of irregular spotting subsequent to a period of amenorrhea of at least one month's duration. Also it was apparent that the shorter period of amenorrhea preceding the onset of bleeding, the more apt was the implantation to be extrauterine rather than intrauterine.

It has been a matter of frequent clinical observation that the more modest the vaginal bleeding, the greater the chance that the bleeding is due to ectopic pregnancy rather than to abortion. Fainting, the presence of a palpable adnexal mass, the secondary signs of pregnancy, continued tenderness, slight increase in the size of the uterus, softening of the lower uterine segment together with a purplish cast to the cervix are helpful in establishing the diagnosis of ectopic pregnancy, but are far from being delineating factors individually.

The diagnosis of ectopic gestation is at the same time one of the easiest and one of the most difficult of diagnoses to make. Emil Novak<sup>10</sup> has stated that ectopic pregnancy may well be considered a disease of diagnostic surprises. The physician who has extrauterine pregnancy "on the brain" will be able to diagnose it when it exists, but he will diagnose it often when it is not present. On the other hand, one who is not alert to the possibilities will meet with many surprises which greater care could have avoided. The most common death dealing complication of ectopic pregnancy is of course intraabdominal hemorrhage and yet this major complication becomes of infinitely less magnitude if a diagnosis is accomplished. It is the undiagnosed intraabdominal hemorrhage that usually carries the fatal consequences.

In this series the number of correct diagnoses actually arrived at prior to surgery were eighty-two out of the 106 cases, for a percentage correct diagnosis of 77.4 per cent (table 8). Correct diag-

Table 8. Diagnosis

Diagnosis	No. of Patients	Per Cent
Correct (Immediate)	39	36.8
Correct (After observation)	43	40.6
Missed	24	22.6

noses have been separated into two major groups. In examining the records of these cases it became immediately apparent that approximately half of the cases were diagnosed upon entering the hospital; in many of the instances a telephone diag-

nosis was apparent. Yet an equal number of cases needed careful observation, a relatively complete laboratory workup and, in many instances, a variety of diagnostic procedures before a correct opinion could be made. Twenty-four of the ectopic gestations that were operated on were not diagnosed prior to the opening of the abdominal cavity; this is a percentage failure of diagnosis of 22.6 per cent. The excellent results reported by Beachem<sup>3</sup> of 82 per cent correct preoperative diagnosis is the best to date.

It is obvious that the doctors caring for this group of patients are in real disagreement with the precept which states "If ectopic is suspected—operate." Out of a total of eighty-two correctly diagnosed cases, forty-three, or slightly better than 50 per cent of the group, were correctly diagnosed only after periods of observations ranging from two hours to two weeks time. During this period the patients were confined to the hospital. In this particular series the two fatalities incurred were in no way due to delay of diagnosis by the physician. If the patient is immediately hospitalized after a diagnosis of ectopic pregnancy is entertained, there is relatively little risk in careful observation in cases in which the diagnosis is in doubt. Such laboratory or clinical tests as might be deemed necessary under the circumstances by the physician in charge of the case may be carried out prior to an exploratory laparotomy.

Table 9. Diagnostic Procedures			
Procedure	No. of Patients	Positive	Negative
A-Z test	30	14	16
Cul-de-sac Puncture	13	10	3
Colpotomy	4		
Diagnostic D & C	6		
Examination under Anesthesia	9		
Multiple Procedures	17		

A variety of procedures were carried out to aid the physician in charge in rendering his absolute diagnosis. The Friedman modification of the Aschheim-Zondek test was completed in thirty patients with practically a 50 per cent division in results. There were fourteen reported positive tests and sixteen reported negative tests, all in patients with ultimately proved ectopic pregnancy. For this reason, it is felt that the Aschheim-Zondek test is of little major consequence in aiding the definitive diagnosis of ectopic gestation. This test may strengthen a wavering determination if it is reported positive; however, for the physician to put any great reliance on a negative test is to commit a grave error which may well lead to dire consequences.

The most popular operating room procedure as a diagnostic aid, was the cul-de-sac puncture which, added to colpotomy, was done in seventeen cases. Three of the cases of cul-de-sac puncture returned no flow of blood or serum to the operator and, yet, at laparotomy were proved ectopic gestations. A diagnostic dilatation and curettage was carried out on six patients who had been bleeding profusely and in whom there was a great question as to whether the operator was dealing with an ectopic pregnancy or with an incomplete abortion. The differential

point of course was the desire on the part of the operator to ascertain whether or not chorionic tissue was present. In nine cases an examination under anesthesia conducted gently, sufficed to make a correct diagnosis. As a note of warning it should be remembered that although the patient may be anesthetized, great care and gentleness should be used in carrying out such an examination as it is perfectly possible to rupture or to abort an ectopic pregnancy by carrying out too brusque an examination with the patient completely relaxed. There were seventeen cases in whom multiple procedures such as an Aschheim-Zondek test plus a cul-de-sac puncture were carried out. In all instances, a correct diagnosis was made in those patients on whom several laboratory procedures were used. One of the most important laboratory procedures is the continued observation of the patient's red blood count and hemoglobin. A gradually descending red blood count or hemoglobin over a shortly sustained period is of real aid in making a correct diagnosis and, in the absence of many other diagnostic signs, has been sufficient to establish a diagnosis of slow intraabdominal hemorrhage. Many minor observations of the patient's general condition are of invaluable aid in contributing to a direct diagnosis. Certainly observation of the patient as a whole should never be neglected due to a concentration of the patient's symptoms in the pelvic region. Of minor import is the fact that Cullin's sign was reported as positive in only two out of the 106 cases.

All patients in whom the diagnosis of ectopic pregnancy is under consideration should be hospitalized as soon as possible after the diagnosis is entertained. Once the diagnosis is established, a laparotomy should be performed, but usually not until blood is available. Transfusions were used freely in this group of patients (table 10) as shown

Table 10. Transfusions

	Per Cent
Number of patients transfused .....	61 or 57.6
Number of patients not transfused .....	45 or 42.4
Number of patients with multiple transfusions ....	45 or 73.8

by the fact that sixty-one of the 106 patients, or 57.6 per cent were transfused with citrated whole blood during the course of their hospital admission, either at laparotomy or during the early postoperative period. Of these sixty-one patients, forty-five, or 73.8 per cent, were treated with multiple infusions of whole citrated blood, usually in 500 cc. lots. Once the diagnosis of ectopic pregnancy is even considered, at least three units of whole blood, totaling 500 cc. each, should be made available to the patient immediately. It is routine to place a needle in the vein of any patient on whom the diagnosis of ectopic pregnancy has been made. Fluids such as one sixth molar lactate, or 5 per cent glucose in either saline or water, are allowed to drip slowly intravenously, thus maintaining an open needle through which whole blood may be given at a moment's notice. The fluids are allowed to flow at a slow rate to avoid a serious elevation of the patient's blood pressure, which might produce in turn still further hemor-



rhage. In those cases of ectopic pregnancy previously discussed, in which the diagnoses were obvious and the patient was considered an emergency, whole blood was started intravenously as soon as the abdominal cavity had been entered and the bleeding point became available. Usually the patient is in better condition at the termination of the operation than she was at the beginning. Certainly a transfusion rule of the thumb seems to be indicated in these cases: "If one transfusion is good, two are better."

Table 11. *Operative Procedures*

<i>Surgical Procedure</i>	<i>No. of Patients</i>	<i>Per Cent</i>
Only involved tube removed	70	66.04
Tube and ovary removed	35	33.02
No surgical procedure	1	00.94

The surgery done usually should be the minimum necessary rather than the maximum possible. In seventy of the 106 cases only the involved salpinx was removed, while in thirty-five, or one third of the total number of cases, the removal of both tube and ovary on the affected side was carried out. In one case at the time of laparotomy, the patient had previously stopped bleeding from a complete tubal abortion. Although there was from 200 to 300 cc. of whole blood, and a complete tubal ova-sac free in the abdominal cavity, it was not necessary to do more than remove the tissue and close the abdomen. A plea might be made at this point for conservation on the part of the operator. There are many instances of exploration in patients with ectopic pregnancy in whom healthy ovarian tissue is freely and frequently sacrificed. In many cases what appears to be an impossible situation technically speaking is actually nothing more than an organized blood clot binding the tube, ovary and, perhaps, omentum or bowel into a large pelvic mass. Once the bleeding point has been demonstrated, the need for haste on the part of the surgeon disappears and careful dissection may well save a part or an entire ovary that might needlessly have been sacrificed. The ultimate results of hemicastration on the reproductive and emotional behavior of patients has been too extensively described by other authors as Allen, W.,<sup>2</sup> Koeneké<sup>7</sup> and Levi<sup>8</sup> to warrant further discussion here. Suffice it to say that untoward haste on the part of the surgeon may cause many years of emotional and physical distress on the part of the patient.

#### SUMMARY

A detailed study has been presented of 106 cases of proved ectopic pregnancy incurred during a ten year period ending January 1, 1948.

1. The greatest age concentration was in the 26 to 35 year age group (69.8 per cent).

2. The distribution into private and ward cases agreed roughly with the hospital admission figures for these two services.

3. Those patients who had not had more than one previous pregnancy constituted 68.1 per cent of all the ectopic gestations.

4. The corpus luteum of pregnancy was present

in the ovary opposite the involved salpinx in 30 per cent of the observed cases, thus giving added importance to the transmigration of the ovum theory as a major etiologic factor.

5. Pain was the most constant symptom of ectopic pregnancy, appearing as a positive notation in 94.4 per cent of all cases studied. Intermenstrual bleeding was present in 70.8 per cent of the cases.

6. A correct diagnosis prior to laparotomy was established in 77.4 per cent of the patients, but observation periods were necessary in half of these cases before a correct diagnosis could be made.

7. Numerous diagnostic procedures were carried out in an effort to establish a correct diagnosis. The most popular laboratory procedure was the Aschheim-Zondek test; the most popular clinical procedure, the cul-de-sac puncture.

8. Fifty-seven per cent of all patients were transfused with 500 cc. of whole citrated blood and 73.8 per cent of these received multiple transfusions.

9. In 33 per cent of the operations both the involved tube and the ovary were sacrificed.

#### CONCLUSION

During the detailed study presented, many important factors have been clarified.

It is apparent in this series that the incidence of ectopic pregnancy in the last one third of reproductive life is almost equal to that in the first one third, a factor frequently overlooked.

Transmigration of the ovum may be a major etiological factor in ectopic pregnancy. Further observation is necessary here as the presented series is admittedly too small for satisfactory statistical purposes.

Pain is the most constant clinical symptom, with intermenstrual bleeding second in importance. The textbook picture of at least one month's amenorrhea followed by spotting was noted in only one third of the cases.

The incidence of correct preoperative diagnosis was materially aided by hospitalizing suspected ectopic cases and observing them under controlled conditions. There is no feeling on the service that a laparotomy must be performed as soon as the diagnosis is entertained.

The Aschheim-Zondek test is of equivocal value and may well do more harm than good. Only 50 per cent of the proven cases of ectopic pregnancy returned a positive test. A negative test must not be relied upon.

If there is an indication for transfusion in patients with ectopic pregnancy, in most cases multiple rather than single transfusions will be needed, and several units (500 cc.) of citrated whole blood should be made available immediately to any patient suspected of having an ectopic pregnancy.

There is rarely any indication for speed on the operator's part once the bleeding point has been controlled and careful dissection may save a large amount of ovarian tissue that has been needlessly sacrificed in the past.

## BIBLIOGRAPHY

1. Allen, Edward: *Clinics* 4:648, 1945-1946.
2. Allen, Willard M.: *Am. Prac.* 3:34, 1948.
3. Beacham, W. D.; Collins, C. G.; Thomas, E. P., and Beacham, D. W.: *J. A. M. A.* 136:365 (February) 1948.
4. Crossen, Harry S., and Crossen, R. J.: *Diseases of Women*, St. Louis, C. V. Mosby, 1946.
5. Falls, Frederick H.: *Mississippi Valley M. J.* 65:133, 1943.
6. Farrell, David M., and Scheffey, L. C.: *Am. J. Obst. & Gynec.* 46:686, 1943.
7. Koenke, Irene A.: *Am. J. Surg.* 72:147 (August) 1946.
8. Levi, Alexander A.: *New England J. Med.* 238:83 (January) 1948.
9. Marchetti, Andrew A.; Kuder, K., and Kuder, A.: *Am. J. Obst. & Gynec.* 52:544, 1946.
10. Novak, E.: *Sug., Gynec. & Obst.* 43:26, 1926.
11. Schumann, Edward A.: *Extra-uterine Pregnancy*, *Gynec. & Obst. Mono.* New York, D. Appleton & Co., 1922.
12. Siegel, P. W.: *Zentrabl. f. Gynak.* 57:686, 1933.
13. Sippel: *Ueber aussere Ueberwanderung des Eies*, *Zentrabl. f. Gynak.* 25:289, 1901.
14. Stander, Henricus H.: *Textbook of Obstetrics*, 3rd revision, New York, D. Appleton-Century Co., 1945.
15. Titus, Paul: *The Management of Obstetrical Difficulties*, 2nd edit., St. Louis, C. V. Mosby Co., 1945.
16. Ware, H. Hudnall, Jr., and Winn, W. C.: *Am. J. Obst. & Gynec.* 42:33, 1941.
17. Ware, H. Hudnall, Jr., and Winn, W. C.: *Southern M. J.* 39:44, 1948.
18. Williams, J. W.: *Obstetrics*, 6th edit., New York, D. Appleton-Century Co., 1930.
19. Williams, Philip F., and Corbit, John D.: *Gynec. Trans.* 68:103, 1944.
20. Williams, Philip F., and Corbit, John D.: *Am. J. Obst. & Gynec.* 48:841, 1944.

## DERMATITIS OF THE HANDS

RICHARD L. SUTTON, JR., M.D., *Kansas City, Mo.*

THE SKIN AS a whole is the dividing line between the person and his environment. It is a barrier. It is subject to all the various adverse influences which affect internal organs for it is dependent on the circulation and metabolism and, in addition, is it subject to the environmental influences from which it protects deeper organs.

## PERTINENT CUTANEOUS ANATOMY

The skin is composed, in effect, of two layers, the outer, the epidermis, being the part which forms the cap of a blister when the skin is blistered, and the inner, the dermis, which forms leather when a skin is tanned. The outer layer is stratified, squamous epithelium, the deeper regions of which are embryonic, in the sense that their constituent cells continually undergo mitosis and provide more epidermal cells which are pushed externally so that they are located progressively farther from their nutrient supply, for which they depend upon the dermis. The outermost epidermal cells undergo a physiological necrobiosis, desiccate and die, their protein becoming keratin. Keratin is relatively inert, impervious to water and resistant to acids; but less resistant to alkali, under the influence of which the cell bodies swell and loosen from one another. All soaps are alkaline. All detergents are defatting agents.

When there is loss of epidermis, new epithelial cells are reproduced by those which remain at the edges of the area of loss, or from cells of the epidermal accessory structures beneath, hair, sebaceous follicles and sweat glands. Thus when only epithelium is lost, there soon will be restitutio ad integrum, if nothing interferes with the process of healing. When dermal tissues are lost, on the other hand, proliferation of fibrous and granulation tissue is necessitated, so that healing depends upon the construction and maturation of scar tissue. Thus an epidermal damage is healed in a few days, approximately a week, without lasting alteration,

while dermal loss means longer healing time and scar. Dermal inflammatory infiltrates may or may not be completely reversible.

## PERTINENT CUTANEOUS PHYSIOLOGY

Physiologically, the skin serves in protection, heat exchange, chemical exchange and sensation. As a protective mechanism, in addition to its physical properties, it supports a constant flora of non-pathogenic organisms and is vulnerable to the variable influx of pathogens. If the skin is dry and cool, the pathogens do not "make expenses," and drying is one of the mechanisms of self sterilization. The impossibility of attaining a state of coolness and dryness of the skin explains the impossibility of curing coccic infections in the Tropics, which caused so many military casualties in World War II. Patients with "jungle rot" were returned to the Zone of the Interior where, for the most part, they got well rather promptly. The diagnoses with which they were returned were usually fungus infections, but I was never able to cultivate fungi, whereas hemolytic *Staphylococcus aureus* and streptococci were recoverable regularly. These were examples of infectious eczmatoid dermatitis under circumstances which were such that the skin could not rid itself of its coccic parasites until the environment was changed. The skin also gets rid of things by exfoliation. Greasy applications interfere with this function.

Heat exchange is accomplished for the skin as a whole by radiation, conduction and evaporation of sweat. The hands have less latitude in accomodating themselves to environmental temperatures than other parts because they are not massive and are "out on a limb" with much surface, per unit of weight, exposed to their surroundings. They are frostbitten, sunburned and macerated in hot water in a manner to which skin located elsewhere is not subjected.

As an organ of chemical exchange, the skin is capable of absorption and of excretion. This fact is not of much apparent concern with respect to

Associate Professor of Dermatology University of Kansas Medical School.



the hands other than necessitating the note that the volar skin lacks pilosebaceous apparatus but is richly supplied with sweat apparatus. Sweating is in part controlled by sympathetic nervous influences, and the tense and anxious individual has cool, wet palms. Sometimes the volar skin actually drips perspiration. Such persons are more susceptible than normal ones to maceration and bacterial and fungus infections and are subject to recurrent and recalcitrant attacks of fine vesiculation, pompholyx, so called, and secondary infection thereof.

#### HANDS AND THE NERVOUS SYSTEM

As an organ of sensation, the skin is of great significance, and the hands embody the principal and most highly developed sensibility of any part of the skin. The eyes mediate perception of electromagnetic energy; the ears, vibrations of the atmosphere; the nose and tongue, finely divided matter of molecular dimensions in air suspension or watery solution. The hands mediate perception of the material features of the external world by physical contact. If microscopic matter concerns the sense of smell, megascopic matter concerns the sense of touch. The hands are busy if the mind is busy. The hands are agitated if the mind is agitated. The hands are the organs of doing things with things. They pick at, pry at, rub and investigate; and they do these things not only to objects but to themselves. The patient with dermatitis of the hands is much tempted to move and extend his fingers, to test the flexibility and sensibility of his hands, and to keep inflamed tissues continually in motion; and if he is worried he does it the more. It is a guiding principle that if tissues are inflamed they should be at rest. The patient with dermatitis of the hands has to be taught and exhorted to keep his inflamed skin still.

#### THE SKIN OF THE HANDS

Anatomically the skin of the hands is characterized by a sparseness of tissue that skin elsewhere does not manifest. There is no skin to waste on hands. The dermis is dense and comparatively avascular. The circular skin defect, full thickness, of 1 cm. diameter, which would granulate and heal on the face in twenty-six days, requires forty days to heal if similar in dimensions but located on the dorsum of the hand. Dermal infiltrations which are reversible inflammatory infiltrates do not have, in the skin of the hands, the richness of vascularity which abets the healing process of dermatitis located elsewhere. The volar epidermis, which extends over the sides of the fingers, comprises two thirds of the epidermal tissue possessed by the hands, and is extremely thick. A loss of volar epidermis requires longer to heal than a loss of similar area in a location where the epidermis is thinner. When epidermis is damaged and epithelial cells swell and burst, the cellular manifestations of vesiculation, by-products of dead epidermis are ab-

sorbed. When volar epidermis is the site of such a process, there is a great quantity, relatively, of dead epidermal material available for absorption and the absorption of it results in damage of a toxic sort to epithelium distantly located. Thus vesiculating disease of the soles induces vesiculation of the palms, and vice versa.

#### MECHANISMS PROVOKING DERMATITIS IN GENERAL

Inflammation is a vascular activity, not fundamentally different in skin than in other organs. Damage by whatever mechanism first results in outpouring of lymph, followed by the clotting thereof, and the intratissue clot acts as a mechanism of fixation. Bacteria caught in the web cannot move about rapidly and the clot, furthermore, acts as a filter and picks out of the circulation whatever foreign substance may be present. Immunity is a function of inflammation. Having met certain kinds of noxae before, the tissues respond differently to subsequent specific exposures. Allergy is a variant of immunity representing, in a broad outlook, a failure of successful immunity, and being a specifically altered reactivity to exposures to specific noxae subsequent to the first and sensitizing exposure. Contactant allergy is an extremely important factor in skin diseases in general, the initial exposure to the substance resulting in hypersensitivity such that subsequent exposures provoke relatively violent reactions. Because of the function of the hands as organs of touching and doing, they are subject, more than skin located elsewhere, to the development of contactant sensitivity.

Contactant disease in general may be divided into (a) the primary irritation provoked by chemicals irritating any normal skin, and the hands get into these, and (b) sensitization by chemicals which affect different individuals differently because of the development of allergy, and the hands, more than other skin, get into these.

#### MECHANISMS PROVOKING DERMATITIS OF HANDS

Thus the hands are exposed to the potentiality of disease provoked by heat, cold, light, moisture, irritant chemicals, sensitizing chemicals and pathogenic organisms to a degree over and above other skin, and are subject in addition to all the diseases of internal origin that skin elsewhere is, including angioneurotic edema, erythema multiforme, psoriasis, syphilis and multitudes of others.

The mechanisms of provocation of inflammatory skin disease of the hands are seven in number: (1) trauma, which heals by epithelization and restitutio ad integrum if the epidermis alone is injured, and requires granulation and fibrosis if dermis is lost; (2) contactant irritation by primary irritants which provoke changes like those induced by trauma and which heal similarly; (3) contactant irritation by sensitizers, which provoke itching, redness and vesiculation when contacted in minute concentration, such that effective quantities of the noxa get about on the skin widely be-

cause the hands touch the body, and the rashes they induce heal tediously because the skin has no means of getting rid of the chemical except by exfoliating it; (4) the mechanism of fixed eruptions, which are eruptions characterized by their flaring and recurring at the same site time after time when the internal noxa, a drug or food, is absorbed time after time; (5) the mechanisms of parasitic invasion by bacteria and fungi as well as animals such as *Acarus scabiei*; (6) the mechanism of the influence of focal infection, which acts either by supplying circulating parasites or by-products of parasites to be filtered out at a distant site by the inflammatory reaction, or acts by supplying parasites which reach the skin via its surface and modify its flora so that the flora continually contains pathogens, and, finally (7) combinations of these mechanisms.

#### COMPLEXITIES OF ETIOLOGY

Dermatitis of the hands is not often due purely to one mechanism. As an example of the activity purely of a physical agent, one may take the inflammation resulting from excessive exposure to sunshine. Redness and vesiculation follow, new epidermis is supplied from beneath, epithelization becomes regular after a period of irregularity characterized by scaling, the dermal reaction is reversible and fades in due time, and the skin is again normal. But complications are possible, even likely. An unfortunately chosen sunburn remedy might be applied, and it would perhaps act as a sensitizer. The person would then have his actinic injury plus the superimposed equivalent of poison ivy dermatitis. This easily could become infected with pathogenic staphylococci, and he then has infectious eczematoid dermatitis as well. So he is given injections of penicillin and breaks out with a dermatitis medicamentosa. If his luck continues bad, his pyorrhea might serve as a place where his acquired pathogens hide out and reinfect his dermatitis more or less continuously. Then he gets some x-ray therapy, improves for a time, relapses, gets more x-ray therapy and winds up with roentgen burns. A less tragic sequence of events in a woman patient might be outlined: constipation, laxative, phenolphthalein eruption, excoriations, sulfonamide salve, sulfonamide sensitization, eventual healing, permanent hypersensitivity to the sulfonamide resin forming the base of nail lacquer, and nail lacquer dermatitis enduring unrecognized, with attendant suffering, loss of time and medical expense.

The point I am trying to make is that dermatitis of the hands is seldom a simple thing etiologically and, in the study of any case, the person as a whole being and his environment as a physicochemical and sociobiologic complex may have to be taken into account.

#### FOCAL INFECTION

The influence of focal infection in engendering chronicity of dermatitis of the hands cannot, in

my opinion, be too much stressed. A typical case is Mrs A, 26 years of age, with two small children to raise, a household to run, the dishes to wash, the laundry to get out and her husband to satisfy in the time not devoted to her sewing and church circle, complains that her hands have been sore most of the time for two years. The doctor tries to get her away from contact with strong cleansing agents, which are the usual cause of dermatitis of the hands in the housewife. He pursues his investigations with diligence and science, discovering that she has a positive patch test reaction to a certain washing powder. But changing detergents does not bring about a cure. He learns that the trouble began soon after the second baby was born. He then examines the pelvic organs, finds an old erosion of the cervix and a cystocele that causes the bladder to contain residual urine and some pus. A gynecologic consultant performs the repair necessary to free the pelvic organs of infection. The dermatitis of the hands disappears permanently, and the positive reaction to patch testing no longer is obtained. Another case history I like to refer to is that of a retired farmer, 75 years of age, whose hands had been sore for most of the last fifty years. His feet showed no tinea, his tonsils were out and his prostatic fluid contained no pus. But x-rays of the teeth showed numerous root canal fillings and root abscesses. The teeth were extracted and the hands cleared permanently within two weeks, after an initial postoperative flare.

#### FOOD ALLERGY

Food allergy is a factor in not more than 10 per cent of cases of dermatitis of the hands. Winston<sup>1</sup> reported on a number of cases and was able to identify food allergens as causative of dermatitis of the hands of fairly characteristic features. The eruptions are persistent, with flares. They are located on the dorsums of the hands and about the wrists. They are dry, nonvesicular and lichenoid, and are roughly circular in outline. The typical feature is the presence of gouged-out excoriations, which are made by the patient during his sleep for he can voluntarily refrain from digging his hands when he is conscious. Identification of causative foods was accomplished, not by scratch tests or elimination dieting but by single food additive diet. In this the patient swallows one food only during twenty-four hours, after which the hands are examined for the presence or absence of telltale excoriations. If these are absent, the food is adjudged innocuous and another single food is added to the allowance of ingestia. When a food is added and is followed by itching and gouging, it is judged probably injurious and is omitted from the diet for some time; later it is retested. Thus one proves, after careful observation, which foods are harmful and which are harmless as the case may be. The most various results are obtained: one patient cannot tolerate coffee, peas or bananas; another is caused to relapse by oranges, lettuce, tomatoes or



chocolate. I have not as yet been able to make any sense of the results from the standpoint of what crystalline chemical substance or its related compounds do the harm, but the patient is satisfied if, by avoiding certain foods, he can be freed from dermatitis, from which he may have suffered for many years.

#### MANAGEMENT OF DERMATITIS OF THE HANDS

When one sees, then, a case of dermatitis of the hands of obscure etiology, in contrast to the simple ones, the procedure that I recommend is as follows: (1) see to it that no physical agencies or nervous hypermotility and excoriation interfere with healing; (2) see to it that no chemical likely to irritate touches the hands, allowing them to touch only water, cotton and carefully chosen, rarely irritating medicines, such as cool 1:500 aluminum acetate compresses and petrolatum or phenolated zinc paste; (3) eliminate coccic parasites as well as may be with such agents as 1:4000  $\text{KMnO}_4$ , 2 per cent aqueous gentian violet, gentle débridement, 2 per cent ammoniated mercury paste, or sulfonamide by mouth or penicillin by injection; (4) eliminate focal infections with due attention to feet as sources of dermatophytids, teeth, gums, tonsils, prostate, cervix and bladder; (5) consider the advisability of investigating food allergy by single food additive dieting, and disregard this possibility if the disease is vesiculopustular; and finally (6) withhold x-ray therapy to be used by necessity rather than by whim.

When x-ray therapy is contemplated, be aware of its capabilities, which may be summarized as follows: It is necrobiotic and accomplishes what it does accomplish by killing the patient's cells. It does not kill parasites; the dose that kills a *Trichophyton gypsum* in a Petri dish is twenty times the dose that necrotizes the full thickness of the skin. It has cumulative effects which can cause serious harm, harm which is especially serious when the hands are damaged, for they contain no skin to waste. Yet x-ray therapy induces resolution of inflammation by necrotizing the cells of the inflammatory infiltrate, and so it may have great value in palliation. It temporarily achieves non-specific desensitization of the dermis, not of the epidermis; and it allays itching symptomatically, inducing vesiculation to dry up. When x-ray therapy is applied to a vesicular dermatitis and that dermatitis gets worse promptly, one may assume that pathogenic staphylococci are at work, and one

may surmise that penicillin by injection and staphylococcus toxoid immunization are measures which may meet with some success.

The elimination of contactant irritants is most efficaciously accomplished by following a technic I<sup>2</sup> described, which is based on the fact that at first one does not know the cause, yet one can eliminate it by eliminating everything that might be causative. The skin heals of its contactant injury within a week or two of inconvenient living in chemical isolation, or fails to heal if the elimination is not successful, in which case the eliminative effort must be intensified until the exclusion of the unknown cause does succeed. Then the chemicals with which the patient desires to come into contact are replaced upon his skin in an orderly fashion, one each day, so that the flare which follows application of the irritant serves to identify the irritant. During the period of isolation, the patient washes with water only and allays itching with cool water or aluminum acetate compresses, along with petrolatum as a lubricant and sedation with barbiturates and antihistamine drugs. Note the similarity of method in identifying contactants by single item addition to that of identifying food allergens by the single food additive diet. These technics are simple and practical.

#### SUMMARY

Inflammatory dermatoses of the hands are an etiologically heterogeneous collection. Many cases are contactant dermatitis, some are primarily bacterial or fungous in origin, and some are due to admixture of contactant and parasitic activity, while a few are due apparently to food allergy. Etiologic factors frequently work in combinations. Medical management includes the effort to unravel the complexities and to defeat them in detail. Obscure and difficult cases often respond successfully when one achieves at one time (1) elimination of contactants, (2) elimination of parasites and (3) elimination of focal infection. The use of relatively safe topical medication, the avoidance of overtreatment and conservatism in the use of roentgen therapy are advised.

411 Alameda Road.

#### BIBLIOGRAPHY

1. Winston, Bernard H.: Dermatitis of the Hands. *Arch. Dermat. & Syph.* 58:357-367 (March) 1948.
2. Sutton, Richard L., Jr.: Contact Dermatitis: Simplification of Therapy and of the Search for Causes. *J. Missouri M.A.* 44:481-484 (July) 1947; Contact Dermatitis: Practical Management and Identification of Cause Without Patch Testing. *Arch. Dermat. & Syph.* 59:36-44 (January) 1949.

#### RADIOISOTOPE AIDS DOCTORS WHO PERFORM BRAIN SURGERY

Difficult surgery for brain tumors is being made easier by radioactive phosphorus produced in atomic energy laboratories. Writing in the May 21 *Journal of the American Medical Association*, B. Selverstone, M.D., A. K. Solomon, M.D., and W. H. Sweet, M.D., Boston, say that in fourteen cases they were able to locate brain tumors at the time of operation by use of the isotope.

When radioactive phosphorus was given to these patients in injections, it became concentrated in the brain tumors. The doctors were then able to locate the tumors by using as a probe a miniature model of the Geiger-Muller counter, an instrument that measures radioactivity. The precise location of the tumor was shown by an increase in the counting rate of the instrument.

## POLYARTERITIS NODOSA

ROBERT M. BROOKER, M. D., *St. Joseph, Mo.*

POLYARTERITIS NODOSA was first recognized by Michaelis and Matani in 1755.<sup>1</sup> In 1852 Rokitsky<sup>2</sup> described the gross lesions which later were studied and described histologically by Eppinger<sup>3</sup> in 1887. In 1878 Meyer<sup>4</sup> presented his diagnostic triad: chlorotic marasmus; polymyositis and polyneuritis; and, gastrointestinal symptoms. Since that time well more than 400 cases have been reported, of which about half have been in English and American literature.<sup>5</sup> There has been some variation in nomenclature and description of the lesions found in polyarteritis nodosa, and there has been controversy over considering this process a separate clinical and pathologic entity.

The term "periarteritis nodosa" probably has occurred in the literature more frequently than "polyarteritis nodosa." This variation in nomenclature has confused the picture by implying that these are two different processes. However, if one reads the descriptions of the lesions and clinical symptoms presented in most of the cases reported, it is soon apparent that they are one and the same entity and that, in fact, the term periarteritis is a misnomer. The process being considered is a panarteritis and, though it may vary from case to case or from one part of the body to another in a particular case, these variations are seen to be quantitative and probably related to the age of the particular lesion. There have been papers written comparing the lesions of polyarteritis nodosa with those of lupus erythematosus disseminatus and rheumatic fever. Some would include dermatomyositis, Raynaud's syndrome, Libman-Sachs disease, temporal arteritis and Buerger's disease as the same fundamental process.<sup>6, 7</sup> To be dogmatic about such a moot question would be foolish.

Operating upon the premise that one is dealing with a separate process from most of the mentioned syndromes, I will speak of polyarteritis nodosa as a separate entity for convenience in writing this paper.

The morbid anatomic features found in polyarteritis may be described briefly as follows: An inflammatory process involving the entire vascular tree, being prone to affect the small arteries and arterioles most extensively, with necrosis and infiltration of the entire vascular wall and perivascular areas by inflammatory cells, with healing by granulation and scar tissue formation, often resulting in constriction of the vessel lumen and sometimes aneurysm formation (16 per cent).<sup>8</sup> Arkin<sup>9</sup> has described four stages through which the lesions may evolve from a beginning fibrinous exudate in the media, resulting in hyaline necrosis; infiltration by inflammatory cells as the reaction spreads inward from the media, resulting in nar-

rowing or complete closure of the lumen; and, infiltration outward, resulting in a periarteritis. Periarteritis is a late phenomenon. In the healing stages scar tissue is laid down with permanent closure or constriction of the lumen of the vessel. The process usually involves only patchy areas of the vessels longitudinally and it may involve only a portion of the vessel on cross section. Thrombosis and recanalization are not unusual.

While the different stages of the arterial lesions can be traced in clinical material, Rich has better demonstrated the evolution of the lesions in experimental animals.<sup>9</sup>

Before dealing with changes in the various organs, it behooves one to consider the protean clinical features of polyarteritis nodosa. Through recognition of mild cases more and more recoveries are being reported. At one time the only material for diagnosis was obtained at autopsy and the disease was considered to be almost invariably fatal. Recently, however, the clinical symptoms of many patients have prompted examination of muscle and skin node biopsies upon which the diagnosis has been made, and more and more patients are seen recovering after such a diagnosis has been established. The recovery rate is now reported to be more than 50 per cent and probably will become greater in proportion to clinical astuteness.<sup>5</sup> To be sure, I do not subscribe to every case reported as polyarteritis nodosa. Some diagnoses are made on the basis of an associated arteritis seen in a diseased gallbladder or other infected organ removed surgically. Such an arteritis may be seen in many organs showing widespread inflammation and is not necessarily pathognomonic of polyarteritis in the general sense. This has led many to believe that localized polyarteritis may reside in only one organ in the body. Such a concept may be entirely fallacious. However, I feel that one may include those cases having clinical symptoms of polyarteritis who continue to have various symptoms after the removal of an organ or piece of tissue upon which the diagnosis can be made anatomically.

Polyarteritis is a disease of many symptoms, in some cases having a tendency to remission and exacerbation. In 50 per cent there is an acute onset and in 80 per cent there is fever at some time over a period of days to years that the symptoms may persist.<sup>10</sup> The entity has been reported in persons from 10 days<sup>10</sup> to 78 years of age, being most frequent in the third decade. It affects males at least three times more commonly than females,<sup>10, 12</sup> and residual disability in recovered cases is infrequent.<sup>5</sup> Meyer's triad of clinical findings are still recognized as important diagnostic features, though they have been amplified and modified by time and experience. Polyneuritis and polymyositis are outstanding features of many cases, and atypical ab-

Prepared while at Department of Pathology, University of Kansas Medical Center.



dominal syndromes frequently occur. Due to the generalized arterial involvement and diversity of symptoms in these cases, many confusing clinical types have been suggested.

The erythrocyte sedimentation rate usually is elevated in active cases and there is a polymorphonuclear leukocytosis in 70 per cent of active cases.<sup>10</sup> In the late stages the serum protein is not uncommonly low and the albumin-globulin ratio may be reversed. Anemia is a feature in long standing severe cases. To facilitate the correlation of symptomatology and morbid anatomy additional clinical features will be mentioned in conjunction with the following discussion of lesions found in the various organs.

*Heart.*—Coronary arteritis has been reported in a high percentage of autopsies; however, cardiac symptoms are less common. A recent history of rheumatic fever is not uncommon and rheumatic endocarditis and valvulitis sometimes are associated. At least three cases of atypical verrucose endocarditis of the Libman-Sachs type have been reported. The significance of these few reports of associated lesions is difficult to determine.

*Lungs.*—Twenty-five per cent are reported involved at autopsy.<sup>10</sup> Infarcts are common. Transitory infiltrations are probably the most frequent clinical finding, and perivascular infiltrations are reported.

*Abdominal viscera.*—Lesions in the abdominal viscera often have led to surgical removal of one or more organs. Atypical abdominal pain commonly leads to mistaken diagnosis and, in association with extra-abdominal symptoms, may lead to multiple diagnoses. Grüber<sup>13</sup> reports the liver involved in 66 per cent of cases at autopsy; the gastrointestinal tract in 50 per cent; the mesentery in 41 per cent; and, the pancreas in 26 per cent. Severe abdominal pain, diarrhea and melena are sometimes present clinically. Erosion and chronic ulceration of the gastrointestinal tract are secondary to involvement of the submucous and muscular coats. Typical sigmoidoscopic findings have been reported as follows: "horizontal, linear, dark red streaks running in parallel lines."<sup>14</sup> While icterus is uncommon, hepatic infarction is relatively common. Splenic involvement occurs in 31 per cent of cases.<sup>10</sup>

*Kidneys.*—The kidney lesions are probably the most significant of those found in any organ. In from 70 to 87 per cent of cases there is renal involvement.<sup>5, 10</sup> Half show infarcts and one third show glomerulonephritis.<sup>5</sup> It has been observed that this syndrome and some of those mentioned before as sometimes being considered the same process, show the presence of albumin, red blood cells, red blood cell casts and other types of casts together in the urine of one patient, which is uncommonly found in other kidney diseases.<sup>15</sup> The presence of renal infarcts in the absence of bacterial endocarditis is suggestive of polyarteritis nodosa.

The renal changes may explain the malignant hypertension seen clinically in from 53 to 64 per cent of cases.<sup>10, 16</sup> Often times a polyneuritis, poly-

myositis and other symptoms associated with abnormal urine findings and hypertension will disappear completely, leaving the patient with a permanently elevated systolic and diastolic blood pressure.<sup>5</sup> Rich, in the experimental production of the lesions of polyarteritis by the injection of horse serum in animals, found that acute glomerulonephritis occurred in many animals coincident with generalized lesions of polyarteritis.<sup>9</sup>

Keegan<sup>17</sup> reports the case of a young white female with hypertension whose resected right kidney showed typical acute lesions of periarteritis nodosa. At autopsy two months later the left kidney showed early arteriosclerosis. Vascular lesions in other organs confirmed the original diagnosis. One might speculate from such a case that many patients with chronic renal disease or chronic cardiovascular renal disease may have healed stages of polyarteritis nodosa which have gone undetected during their acute episodes.

*Skin.*—The most outstanding morbid process in the skin in this disease is the formation of subcutaneous nodules. The nodules usually occur in crops and last from days to months. Biopsy of such lesions shows the typical panarteritis. Those having rapid regression are formed predominantly by edema; those lasting over a period of months show chronic inflammation, scarring and sometimes calcification of the media. Almost all types of skin rashes have been reported in association with the other clinical features of polyarteritis. In most cases the skin lesions are transient.

*Eye.*—Müller described the lesions of polyarteritis in the retinal vessels in 1899.<sup>18</sup> There are many changes in the retina seen in different cases, including retinal detachment, perivascular nodules, exudates, hemorrhages and variation in the caliber of the retinal vessels. Advanced cases show typical arteriosclerotic retinitis. Occlusion of the central artery of the retina has been reported, and conjunctivitis commonly occurs at some time during the course of the illness.

*Nervous System.*—As high as 20 per cent of cases have been reported showing changes in the central nervous system.<sup>10</sup> Any cerebral syndrome may occur clinically and meningism is a frequent feature in children.<sup>5</sup> The more thoroughly the peripheral nerves are examined the more frequently involvement of the vasa nervorum is found. This leads one to believe that the peripheral neuritis can be explained on a vascular basis.

*Skeletal Muscle.*—The presence of typical lesions in biopsies from affected muscles has been one of the most common and satisfactory means of diagnosis of this syndrome in patients who have presented suggestive clinical symptoms. They have often recovered following the diagnosis of polyarteritis nodosa from a muscle biopsy.<sup>5</sup>

The question of etiology is yet unsolved. Hypersensitivity is probably the most discussed factor in regard to etiology. Rich has shown in human material<sup>19, 20</sup> and in experimental animals<sup>9</sup> that the

typical lesions of polyarteritis are sometimes found in conjunction with allergic reactions to horse serum and sulfonamides. The administration of many other drugs has been associated with isolated cases. The histologic similarity of the vascular lesions seen in a histamine wheal and in polyarteritis nodosa has been alluded to.<sup>21</sup> However, this evidence is not sufficient to conclude that all cases are manifestations of allergic or hypersensitive reactions. The disease is sometimes associated with asthma and other allergic conditions but this occurrence or the finding of a past or family history of allergy is in less than 20 per cent of the cases. And eosinophilia is found in less than 20 per cent.<sup>10</sup>

The syndrome was associated with syphilis in the early part of the century and later tuberculosis was placed as an important etiologic agent. While many have stated that the disease is probably viral in origin, none has produced proof of such an etiologic agent. It has been believed that streptococcal infections play an important etiologic role, but there has been no well founded experimental evidence to substantiate this theory. The lesions cannot be reproduced in animals by the injection of bacteria or bacterial toxins,<sup>6, 9, 21</sup> while they can be beautifully simulated by the injection of horse serum and other substances producing allergic responses.<sup>9</sup> However, that a history of an antecedent or concurrent coccal infection has been commonly reported cannot be ignored. Perhaps investigations of antistreptolysin and agglutinin titers, similar to the work carried out by Kalbak<sup>22</sup> on patients with rheumatoid arthritis, will shed some light on the

significance of associated acute or chronic streptococcal infection.

It has been my purpose to call this disease syndrome to the attention of the medical profession again since the condition may be much more common than previously recognized. By early recognition of the clinical findings which may fit one of the many symptom complexes of polyarteritis nodosa, and through the use of muscle and skin node biopsies more frequently it is believed that many heretofore unrecognized cases can be diagnosed and that a higher percentage of recoveries will be found.

#### BIBLIOGRAPHY

1. Michaelis and Matani: 1755; cited by Schreiber, R., O. Kummel, Königst. i. Pr., 1904; cited by Diaz-Rivera and Miller.
2. von Rokitsansky, C.: Denkschr. d. k. Akad. d. Wissensch. 4:49, 1852; cited by Harris, Lynch and O'Hare.
3. Eppinger, H.: Arch. f. klin. Chir. 35:1, 1887; cited by Harris, Lynch and O'Hare.
4. Meyer: Virchows Arch. f. path. Anat. 74:277, 1878; cited by Miller and Daley.
5. Miller, H. G., and Daley, R.: Quart. J. Med. 15:255, 1946.
6. Bergstrand, H.: J. Path. & Bact. 58:399, 1946.
7. Teilum, G.: Acta Medica Scandinavica. 123:126, 1946.
8. Arkin, A.: Am. J. Path. 6:401, 1930.
9. Rich, A. R., and Gregory, J. E.: Bull. Johns Hopkins Hosp. 72:65, 1943.
10. Harris, A. W.; Lynch, G. W., and O'Hare, J. P.: Arch. Int. Med. 63:1163, 1939.
11. Wilmer, H. A.: Bull. Johns Hopkins Hosp. 77:275, 1945.
12. Higgins, W. H.: South. Med. J. 39:453, 1946.
13. Gruber, G. B.: Virchows Arch. f. path. Anat. 258:441, 1925; cited by Miller and Daley.
14. Felsen, J.: Ann. Int. Med. 15:251, 1941.
15. Krupp, M.: Arch. Int. Med. 71:54, 1943.
16. Logue, R. B., and Mullins, F.: Ann. Int. Med. 24:11, 1946.
17. Keegan, J. J.: Arch. Int. Med. 36:189, 1925.
18. Müller, P.: Festschr. 50 Jahr. Staedt. Krankenh., Dresden, 1899; cited by Miller and Daley.
19. Rich, A. R.: Bull. Johns Hopkins Hosp. 71:375, 1942.
20. Ibid. 71:123, 1942.
21. Harris, W. H., and Friedrichs, A. V.: J. Exper. Med. 36:219, 1922; cited by Miller and Daley.
22. Kalbak, K.: Ann. Rheumat. Dis. 6:230, 1947.

#### TEST DRUGS FOR USEFULNESS AGAINST HIGH BLOOD PRESSURE

Clinical testing of two synthetic compounds, priscol and dihydroergocornine, for usefulness against high blood pressure is reported in the May 21 *Journal of the American Medical Association*.

The drugs counteract constriction of the blood vessels and other effects produced by the sympathetic nerves, which regulate the heart beat, blood flow and many other body functions.

Use of priscol in two cases of high blood pressure is described by Max P. Rogers, M.D., of High Point, N. C. In both patients, one of whom had received priscol only two weeks, blood pressure was greatly lowered, Dr. Rogers says. Both patients tolerated the drug well.

Priscol shows promise of being useful in disorders in which the blood circulation to the legs is impaired, Dr. Rogers' study shows. Three cases of such disorders as-

sociated with hardening of the arteries, three cases associated with diabetes, and two cases associated with thrombophlebitis showed improvement after priscol therapy.

Patients with certain heart conditions may not be able to take the drug or may be able to take it only in small quantities, however, he indicates.

Tests of dihydroergocornine against high blood pressure are reported by Drs. Robert W. Wilkins, Edward D. Freis, and Joseph R. Stanton, from the Evans Memorial and Massachusetts Memorial Hospitals, and the Department of Medicine, Boston University School of Medicine, Boston, in another article in *The Journal*. The activity of dihydroergocornine in lowering blood pressure is unpredictable, being negligible in some patients and "profound" in others, they say.



## THE NEED OF BELONGING IN WAR AND PEACE: ITS EFFECT ON DELINQUENCY

NATHAN BLACKMAN, M. D., *St. Louis*

LIFE, OR GROWTH, implies repetitive casting out into the unknown. Man continuously leaves behind him the warmth and security of an earlier symbiotic existence, as well as the coddling carefree period of early infancy. How secure is that early "rosy" period of infancy? What about the child whose parent considers herself trapped by having conceived him prematurely? Whose parent considers it a duty to go through a lifetime of sham, as soon as the child's conception has become a certainty? What became of the guilt feelings of the parents faced with caring for a child whose mere existence is a reminder of the implacability of their fate, the finality of their marriage? What about the compensatory over-solicitude, the neurotic anxiousness about the child's well-being, the inhibiting need to brag, seek admiration and perpetuate dependency—all of it as a desperate reinsurance against the lurking dissatisfaction the parent nurses within him?

This theme—parents seeing in their children an excuse of their own temerity, and then responding with hostility to the role and demands which parenthood imposes—it is this ambivalence that forms the first barrier to the child's need to belong. It is this tangled, insincere relationship which is responsible for the perpetuation of rebuffs the growing individual will meet in life.

It is common to observe a child resisting, to the point of ignoring, emotional ties too difficult to support. The guilt ridden mother, who tried abortions, dreamt about the child being dead, dreaded the moment of delivery and denied him her breast—this same person showering affection and overprotection—cannot escape rearing a youngster inhibited, insecure in his abilities, lacking in spontaneity and limited in his ability to share, participate and become a part. The emancipation of the child will bear for a long time the imprint of anxieties unresolved and longings but partially satisfied.

The child's quest is: to be accepted; to belong unquestionably, and not only when he is good; to be able to feel the strength, the affection and the respect of the adults; to be able to visualize the period when he will reach a status of equality and be similar to the adults he admires. This urgent need of entering a threshold of values that are finite, of values that are not questioned, this very need is absent in homes torn by tensions and latent hostilities.

The child, rebuffed in his explorations of the grown-ups about him for the sincere, affective, strong and vigorous either may recoil from the need to ape and emulate them, or, what happens

more often, he continues to nurture a disaffection for the impending adulthood. His need to belong, to identify with the mature about him, is thwarted not by design, not by commission, but by the day to day omissions that the insecure adults strew along the path of the growing child.

A mother of four children describes her first born, who at 15 seems to resist paternal efforts to bide at school, relate to the siblings or pay the least respect to his parents, "I guess, I had a very hard time as a girl. I was the oldest of six. I had to struggle hard to help raise them, as we had no father. I married against mother's advice. I found out that I did not love my husband but I had to carry on as I became pregnant right away. . . . If it were not so important not to admit that mother was right, I might still have broken up the marriage. I used to dream that I would have a miscarriage. I hoped that someone would perform an illegal operation. I guess that my obstetrician was right after all for as soon as I had my son, I idolized him and made so much fuss about him. But through all those early years of our marriage, the separation from husband, the early struggles and bickerings, I had the continuous awareness that this son of mine had some of the same make-up, the same lack of strength and lack of courage, that made me so disappointed in my husband.

"I myself wished to be pampered, to have someone else do my worrying, to be able to lean on somebody else. But in my home my husband was just another one of the children as far as the bucking-up, encouraging, working for and showering of affection was concerned. Now, when my son does something I do not approve of, I find myself much angrier that he does not go through with it than when he throws in the sponge and comes back crying to me. If he were to run away to sea, I would actually much prefer it, than to have him call me up from the port, crying for me to come to get him and promising me to act like a baby again."

This mother still sees in her 15 year old son the vestiges of the male who has let her down sixteen years ago. The resentment against the male colors her daily handling of the four children (husband included, I guess). The son's day dreaming of flying to foreign countries, his dreams of power, wealth, need to become a famous pilot, go along with the utter shunning of emotional participation in his home life.

To discover that parents are ineffectual may not be rare. But to have sensed all along infantile egotism, vacillating weaknesses and repeated inconsistencies in the behavior of the adults—this will surely accentuate the withdrawal into emotional

isolation. The child learns then to live without being loved, to withhold affection for fear of not getting any return, to maintain a stage of chronic fright without trusting any of the reassurances.

The delinquencies during adolescence are often merely a need to challenge patterns of living, which are so strange for immature isolated individuals. Delinquent behavior also may express a need of retribution for the inconsistencies and faithlessness of the childhood existence. Often one hears "I always loved Mama, but I cannot help but continue to worry her."

The youth who is keenly aware of being an isolate, of not belonging, and of being unable to love, has a repeated need to prove, through hostile acts, that his existence does impinge on society. Thus, the lack of faith or trust in the parental figures continues to intrude on the innate respect of authority. The conflicts ensued represent clashes of a person devoid of genuineness, searching aggrandisement from without, in order to still the sense of smallness that is lurking within him. A typical sequence of events is the following case:

John is 17 years old. He was raised in an economically deprived home in a small town in the Southwest. His father drank. His mother was arrested for criminal negligence. A brother had epileptic spells. John stuttered as a child, was a bed-wetter, repeatedly ran away from home since the age of 4; he was a truancy problem at school (which he attended until the fourth grade) as well as in the various foster homes where he sojourned in between periods at training school. He still recalls proudly, how his father wanted to take him along, at the age of 4, upon the father's final leaving the home. He prides himself as being like his father, being willful, strong, unpredictable, temperamental. But his only recollection of his father is the only loving gesture he probably experienced during that period: An impulsive desire by his father to take him along. A stepfather enters the picture. The only effect seen in the case history is an arrest of the child, at the age of 10, for "attempted murder," an assault with a knife on his stepfather following an altercation between the parents. In the meantime the police record gradually built up. There are nine citations from the age of 12 to 15. The offenses range from delinquency through car theft and parole violation. Repeatedly the agencies refer to him as incorrigible. But at no time was there an effort made to understand his rejection of the stepfather, distrust of adult figures and latent need to recreate certain dependency situations he so sorely lacked throughout infancy.

The drive to enter the military service, achieved at the age of 16, was a desperate attempt to find an anchor, to have a social sanctioning for expressing some of the aggressiveness that had accumulated within him. Needless to say, the military career was of short duration. The inability to trust, to share, to give and only eventually receive, to evoke friendship and obtain meaningful satisfaction from it, wrote a sorry ending to a military career that

lasted only ten weeks. Court-martials ensued with sentences to confinement, and a miserable adjustment to it at the time I saw him.

The things this youth missed are clear enough. The lack of acceptance, the threatening feeling towards parents, whose actions were not predictable, and who were frequently hostile, undoubtedly have been the mainspring of the sad state this youth is in today. But these extremes of withdrawal of emotional strength, as exemplified by this case, are only the accentuated, the pathological of the feeling of insecurity that may be, in an attenuated form, harbored by others who are not in flagrant discord with their environment.

This turbulence and rage of the adolescent—the need to belong at the price of cultural or social transgressions—often continues into adulthood. It was an obvious part of the soldier in the throes of disciplinary infractions. The desperate need was to become identified, to make ties, to find a cause (which ultimately found expression in the performance of antisocial, or aggressive acts). In the words of some, "The army was the only thing I could have faith in." The results, however, were often dismal. The search for belonging was counteracted by the lack of ability to render, to comply. The chafing at an enforced, controlled existence, and of father—figures lacking in understanding, became soon unbearable.

To illustrate further the incongruity of wishing to "grow up" in the military service, one may cite the youth who enlisted at 15 because he had "to prove that I am somebody and that I am tough." Yet each time he found disciplined existence too irksome, he resorted to blackouts, or suicidal gestures. He had several military discharges, followed by fraudulent reenlistments. He explained the latter by, "A need to prove to myself that I can make it, as well as a need to get even with those who got me out of the service." This youth was raised by his mother and an aunt who alternated extreme indulgence, jealousy between the two women, and tyrannical over-solicitude.

This youth also claims profound love for his mother, yet he is aware of hurting her deeply whenever he gets into difficulties. Sometimes he almost relishes getting into a serious predicament. It is his way of bring back to his mother the price for her spoiling and dominating his early existence. He went through his adolescence feeling, "left-out from older people's world." He gradually began to feel inferior to others, indulged in pilfering, setting fires, sex play which was followed by sadistic beatings ("I was afraid they would tell mother, they might squeal."). The feeling of being alone, of being different, of not having grown-up or ever becoming an adult, has always been with him. He day-dreamed of being important, a wealthy man's son, someone who traveled everywhere he wanted to; and at times he even engaged in imaginary conversation with himself, as if he were both boy and girl. Continuous exaggerations, pathologic lying, escapades, infractions of civil laws and, ultimately,



a cruel, sadistic murder culminated a pattern of not conforming and the ultimate aim at punishing mother, grown-ups, the social order, for the gnawing feeling of being set apart, for the frustrating consciousness of not belonging. The sense of isolation was bred in the lurking awareness of the adults inspiring mistrust during his early years, carrying on jealousies at his expense, not being genuine, and even resenting his existence. Here again the overt expression of the maternal rejection was in terms of exaggerated care and anxious anticipation of the youth's wishes.

The war time army with its unifying spirit of facing a common enemy, of channeling hostility towards the outside, provided outlets for sadistic behavior. In peace time, the loveshorn soldier continues his battles for recognition on a more personal, self-punishing level. In the military service the intrinsically immature person has found a group existence, a relaxed acceptance of his role without undue competitiveness, a feeling of having outgrown the emotional tangles of his earlier existence. A longing for the stratified, relatively stable and objective relationship of army cadre remains among the veterans. The need to recapture that period of belonging, tasted during military service, is expressed in the chafing and bickering at the daily incertitudes of civilian life. It also is seen in the indifferent acceptance of self-imposed discipline, aimless courses of training, restlessness, travel (even to the point of visiting former buddies), with its attendant disillusionment. All this aimless thrashing about fails, however, to still the lurking fears and bruised feelings of childhood.

To return to the military service as a means of coping with the lonesomeness can be successful only if accompanied by a matured cognizance of oneself. An awareness of the mounting insecurity in a social order that is not a fixed one, and a conscious need to substitute for it the inflexibility of the military regime are important for a good adjustment in the peace time military service. Otherwise the aggressive intolerance of one's own function as a civilian may continue to plague the soldier and force a poor army integration.

The majority of the youth have followed-up the enhancement that military service represented with a hangover of grim accedance to the civilian pace. Yet, the competitive drive to get ahead is obviously in conflict with the recent period of military service, when mere belonging was a virtue; nor does conforming to the expectations of a subjectively traumatizing family constellation become suddenly easy.

Cultural or social handicaps add their loads in the strife for acceptance. A recent group study of deprived, blighted areas pointed out the insularism, the sense of discrimination, the feeling of victimization, and the creation of narrow, egotistical, hamlet-limited solidarities, which cast this group in the role of not responding with mature loyalties to group existence or to national demands.

The extent of social participation and adult ac-

ceptance of mores may be either personally or culturally conditioned. The feeling of having been unjustly deprived, of implacable fatalism, the sheer inability to transgress, or surpass, may cause faltering incertitudes either because of intrapersonal experiences or through socially conditioned situations.

The war years have created patterns of belonging, a sense of stability, and an enhanced status to both civilian and military by removing competitiveness, and by allowing mass participation as well as the venting of hostilities outside of the mass and toward the enemy. In peace time the substitution of competitiveness underscores the very condition of insecurity, that has been postponed during the war period. The need to excel, to reach a level higher than one's parents had—the tradition of everyone being born within reach of the White House—these drives accentuate the basic aloofness of oneself, an awareness even harder to support due to the recent memories of feeling both strong and worthwhile while sharing in the sense of belonging to a common effort.

This dichotomy—of man biologically gregarious and social, versus man shorn of the natural acceptance of life—of seeking a design for life, and yet refusing to accept its innate meaning, is the real crux of the problem. Man, in search of morality, finds a sense of meaning in a collective destructive effort. Man, shorn of this common participation, is at a loss to account for his constructive role in society. It is as if a common expression of self-preservation, translated into hostile behavior toward the enemy, makes it permissive to weld a sense of belonging; whereas every day's joys of accomplishment and living cannot do that by themselves.

Is it possible, that present society, more fluid, undergoing greater changes, may contain some of the seeds that contribute to this dichotomy? Are our concepts of competitiveness in conflict with an era so unstable as ours is? Is there a limitation on personal creativeness in a world rapidly manned by robots (electric or atomic)? Is the sense of life in terms of work rapidly changing to a sense of life in terms of leisure?

Sometimes one wonders whether the healthy egoism that created rugged individualism has become perverted to a code of life so narrow that it stifles the individual. The intrinsic security of growth, reproduction, maturity, and ripe old age—all processes of a certainty in nature—have become perverted into varying stages of fearful anticipation so that the birth of a child conflicts with the housing prospects, middle age connotes the precariousness of keeping a job, and the period of old age with being unproductively superfluous.

The insecurities of our times, added to the traumatizing effects of an insecure childhood pattern, conjure an increase in delinquency acts not merely as a gesture of contempt for our social codes. The need of belonging, or the hidden fear of feeling isolated often find expression in the same outbursts of contempts for what is accepted as normal, sacred,

or inviolate. An antisocial act also may represent a means of forcing oneself on society's cognizance, a desperate need to make one's presence felt, one's existence listened to, while the parental figures are made to cringe, feel hurt by the same gesture.

#### SUMMARY

The insecurity of the individual is frequently a result of the immature, fear laden attitude of his parents. A gradual, pernicious withholding of emotional involvements may result from a childhood surcharged by fear, or by feelings of being unwanted. The three cases discussed show increasing degrees of emotional blunting. The results of these delinquent patterns, both in the military service and in civilian life, meant periods of incarceration for obvious social infractions. The design of hurt-

ing, or offending to the point of being punished, reiterated a childish pattern of alarming the environment in order to obtain attention. It also meant punishing a parental figure for its part in robbing the individual of his innate ability to belong, to participate.

Periods of crisis, such as the recent war, enhance the urge of belonging, and bring out further the basis inability of the emotionally deprived person to participate and share in emotionally charged situations. Trends of our times that conflict with this universal urge of belonging are also conducive for delinquent patterns in adolescents.

Delinquency will be coped with, as the sense of belonging, from early life on, is nurtured as a right and not by sufferance.

4500 Olive St.

## PRIMARY ATYPICAL PNEUMONIA TREATED WITH AUREOMYCIN\*

MICHAEL BERNREITER, M.D., *Kansas City*

AND

JOSEPH M. HOLTHAUS, M.D., *Kansas City*

#### CASE REPORT

AUREOMYCIN is an antibiotic derived from a strain of streptomyces aureofaciens. This substance exhibits some striking activity against many rickettsiae and certain viruses. The toxicity of the drug is low except after intraveneous administration. Occasional nausea and vomiting does occur when given orally.

In view of the experimental evidence that aureomycin possesses an unusual therapeutic range in the field of many rickettsial and virus diseases, it seemed desirable to use this antibiotic in a case of atypical pneumonia. This patient was first treated with penicillin without benefit.

J. S., 25 years old, was admitted to St. Mary's Hospital on January 26 with the complaint of fever and malaise for two weeks, productive cough and occasional bloody sputum for the last two days. On the day of admission the temperature was 104 F. and the patient perspired profusely. He complained of some chest pain, loss of appetite and uncontrollable cough. Past history and family history were noncontributory. Before entering the hospital he received several injections of 300,000 units of penicillin intramuscularly and this was repeated on the day of admission.

The next morning his temperature was 104.8 F. He had several chills and sweats in the night; he appeared quite ill and his cough was worse. His sputum was blood tinged. Throughout his illness he was hostile and difficult to handle.

On physical examination the patient showed some dyspnea and cyanosis, respiratory rate was increased pulse was 120 and regular. Medium moist rales occurred on deep inspiration at the right base and to a lesser

extent on the left. No definite area of dullness could be demonstrated. The breath sounds were diminished but vesicular in character over the right lower lobe. Other physical findings were within normal limits.

Roentgen ray examination on admission showed a pneumonic consolidation of the right mid and lower chest. The right upper chest and the entire left chest was clear. Impression was pneumonic consolidation at the right base.

**Laboratory:** The urinalysis showed an acid reaction, a specific gravity of 1.011; albumen 1 plus and the sugar was negative. Microscopic examination showed a few red cells and some white cells. Blood count showed 8,700 white cells, red cell count 4,510,000, hemoglobin 76 per cent, color index .84, stabs 8, segments 70, lymphocytes 20, eosinophils 2. Wassermann and Kahn were negative. Typhoid "O" was positive 1-80; typhoid "H" was negative; paratyphoid was negative; brucella abortus was negative; proteus OX19 was negative. Stool specimen was negative for occult blood and no ova or parasites were found. Sputum with Gram stain revealed many gram-positive cocci in clusters and a smaller number of gram-positive diplococci.

**Treatment:** Penicillin was discontinued and the patient was given aureomycin 500 mg. orally every three hours day and night.

In twelve hours his temperature dropped to normal and remained so during his stay in the hospital. The drug was continued for a period of forty eight hours, at the end of which the patient had received 8,000 mg. of aureomycin. His recovery was almost dramatic. The physical findings were entirely normal. The patient had a good appetite, was up and about and had no complaints. He remained afebrile throughout the period of observation. Roentgen ray showed the pneumonic process resolving. There were no side reactions to this medication but the patient complained of slight nausea and diarrhea.

\* From the Department of Medicine, St. Mary's Hospital, Kansas City, Missouri.



The diagnosis in this case was made by exclusion, by the low leukocyte count and the failure of penicillin to control the infection. The cost of aureomycin in the amount prescribed here was \$25.00 per day. The expense

seems justified if one is dealing with an atypical pneumonia, which cannot be controlled otherwise.

436 Professional Bldg.

## CARCINOMA OF THE COLON AND RECTUM

EVERETT D. SUGARBAKER, M. D., *Jefferson City, Mo.*

CARCINOMA OF the colon is a disease of the bowel mucous membrane. It almost invariably produces symptoms, in general, occupies a position of intermediate malignancy among the commoner tumors and is anatomically amenable to treatment. It should, therefore, afford an excellent prognosis.

Exclusive of carcinoma of the skin, carcinoma of the colon and rectum has constituted about 10 per cent of all of malignant tumors seen. It is somewhat more common in males than females in the ratio of 1.4 to 1. Though it may occur at almost any age, 80 per cent of the patients range from 41 to 70 years of age, with an average age of 58.5 years.

### ETIOLOGY

There seems little doubt but that the majority of the carcinomas of the large bowel originate in polyps. Studies of large autopsy series have shown that these tumors are present in about 10 per cent of the cases examined,<sup>1</sup> and there is a definitely increasing incidence with advancing age. Approximately 75 per cent of polyps occur in the distal colon. It hardly can be considered coincidental that approximately an equal number of the carcinomas occur in the same anatomic portion of the bowel. The sessile polypi appear more likely to undergo malignant change than the pedunculated type. That patients with congenital polyposis invariably will develop carcinoma of the colon unless prophylactically treated, is a well established fact. The development of early malignant change in a polyp, as with early carcinomas developing elsewhere, is a matter for microscopic diagnosis.

Among the inflammatory conditions of the bowel the changes resulting from chronic nonspecific ulcerative colitis alone appear to exert some influence on the mucous membrane of the bowel predisposing to subsequent malignant change.

### PATHOLOGY

Apart from the epidermoid tumors which may arise about the anus, all other carcinomas of the large bowel may be considered adenoid in type. As do tumors elsewhere, they vary in the degree of their differentiation, the malignant adenomas constituting the more differentiated group. Colloid or gelatinous carcinoma, probably derived from the goblet cell, is capable of expending considerable energy in the production of mucin. Particularly those in which the mucus tends to accumulate

within the cell have a marked disruptive capacity on surrounding structures tending to break through the layers of the bowel wall relatively early and to force their way into the lymphatics rather extensively.

The gross characteristics of bowel tumors are probably of greater significance than their microscopic features. The papillary exophytic tumors which tend to attain considerable bulk and expend most of their energy in intraluminal growth offer the best prognosis. Those tumors which, though often of lesser size, tend to invade the bowel wall producing a shallow intraluminal ulceration, usually offer a poor prognosis. In the region of the sigmoid and rectosigmoid considerable scirrhous reaction frequently is produced at the site of the tumor, for which reason obstructive symptoms frequently may occur in this area.

Carcinomas of the large bowel present four possible routes of spread: (1) by direct extension, (2) by way of the lymphatics (approximately two thirds of all resectable lesions already present nodal metastasis), (3) by way of the blood capillaries and (4) by transplantation throughout the peritoneal cavity.

### SYMPTOMS AND SIGNS

Early symptoms produced by carcinoma of the large bowel follow no specific pattern. Some alteration in bowel habit occurs in well over 95 per cent of patients. The fact that these symptoms frequently suggest more common bowel conditions often masks the true diagnosis for long periods of time. For this reason the average duration of symptoms from onset until definitive treatment is accomplished varies from nine to twelve months. It would not be practical on such an occasion to elaborate on all of the symptoms which a carcinoma of the colon might produce. The passage of gross blood per rectum is invariably the most common and important, however, and must never be dismissed casually by the doctor. Back pain with or without radiation down the thighs or weight loss in excess of twenty-five pounds are ominous signs and are, therefore, of prognostic significance. The former, in carcinoma of the rectum, usually indicates pelvic nerve involvement and all of our cases preoperatively presenting this symptom have developed pelvic recurrence. Severe weight loss usually indicates metastatic abdominal disease, particularly hepatic metastasis.

The diagnosis of these tumors appears simplified

Presented at the Postgraduate Clinics of Wisconsin.

if one bears certain important facts in mind. Approximately 50 per cent of all carcinomas of the large bowel occur in the rectum and are, therefore, accessible to carefully done digital examination. Another 25 per cent of these tumors occur in the lower sigmoid and rectosigmoid areas and are, therefore, in a position to be examined readily with the proctoscope. Consequently 75 per cent of these tumors can be diagnosed readily by means of no



Fig. 1. Carcinoma of the cecum initially treated for acute appendicitis; subsequently requiring removal of large segment of abdominal wall along with the tumor.

more examining facilities than any physician usually has in his own office. The remaining 25 per cent will require the assistance of the roentgenologist before a definite diagnosis can be made. A word of caution might be interposed at this point. Whenever a colon tumor is suspected it is safer to proceed with the barium examination initially from below. Partially obstructing tumors may be made to obstruct completely if barium is given by mouth. Of the greatest help in tracking down tumors of the large bowel not within the reach of the examining finger, has been the routine examination of the stool for the presence of occult blood. With the exception of some of the benign polyps, these tumors are almost always ulcerated and, though gross blood may not be apparent, chemically detectable amounts are always present in the stool. In the face of negative physical findings a strongly or persistently positive guaiac test demands further investigation.

Carcinomas of the rectum, as a rule, have a

rather characteristic appearance and consistency which, after being noted on several occasions, is not apt to be forgotten. Early tumors, however, may not be so characteristic and may be mimicked in their appearance and feel by various granulomatous conditions specific and nonspecific. The simple resort to biopsy through the proctoscope will identify the carcinoma readily. It might be well to emphasize at this point that no polypoid lesion should be treated as if it were benign until biopsy has proved it to be so. The roentgenographic diagnosis of colon carcinoma is usually not difficult for the experienced roentgenologist. Occasional lesions will require all of his acumen. The greatest difficulties arise in differentiating carcinoma from diverticulitis and from occasional instances of segmental colitis. Since carcinoma is a disease of the mucosa, the mucosal markings will be destroyed early at the tumor site in this condition. In our experience the differentiation between these conditions has been even more difficult at laparotomy than on x-ray film, and I believe that every surgeon who



Fig. 2. Bulky carcinoma of hepatic flexure invading the gallbladder and right lobe of liver. Removed with gallbladder and large V-segment of right lobe. Well three years later.

resects any number of colon carcinomas has at least several of these benign lesions to his credit. There seems little question but that the safer procedure at the time of laparotomy is to resect whenever in doubt.

#### TREATMENT

The treatment of choice for all cancers of the colon and rectum is radical removal and it is to-



# paroxysmal dyspnea...

"When an acute attack of paroxysmal dyspnea sets in, Aminophyllin administered intravenously is generally sufficient to relieve the distress."<sup>1</sup>



In paroxysmal dyspnea, bronchial asthma, selected cardiac cases and Cheyne-Stokes respiration,

## SEARLE AMINOPHYLLIN

acts by relaxing the bronchial musculature, encouraging resumption of a more normal type of respiration and reducing the load placed upon the heart.

Searle Aminophyllin is available in tablet, ampul, powder and suppository forms.

*\*Searle Aminophyllin contains at least 80% of anhydrous theophylline.*

G. D. Searle & Co., Chicago 80, Illinois

SEARLE RESEARCH IN THE SERVICE OF MEDICINE



1. Murphy, F. D.: Treatment of Cardiovascular Emergencies in the Home Wisconsin M. J. 42:769 (Aug.) 1943

ward this purpose that all effort should be directed. It is easily understandable that patients of this age group are apt to present coincident complicating degenerative diseases of one sort or another which require careful evaluation and maximum correction. In addition to and as a result of the carcinoma, hypoproteinemia, hemoglobinemia, hypovitaminosis and intestinal obstruction also are commonly



Fig. 3. Large carcinoma of Sigmoid also requiring removal of generous portion of abdominal wall. Typical sort of filling defect seen in left colon lesions.

found. Such cases will require intensive and painstaking preoperative preparation. Often from seven to ten days may be profitably spent in such care. Multiple preoperative transfusion, high protein, high caloric and high vitamin diets should be employed in such instances. Patients presenting lesions for which resection and anastomosis are contemplated are generally placed on one of the colon antiseptics. Where rectal resection is contemplated, we have not found it necessary to employ these but carry out a regime of preoperative gentle saline catharsis and lavage. Patients presenting obstructive symptoms will require preliminary decompressive procedures. Our experience has been that when some doubt exists as to the necessity for preliminary operative decompression it is safer to err on the side of the additional operative procedure than to attempt to resort to vigorous medical measures. The Miller-Abbott tube may be used to decompress the small bowel in well established complete colonic obstruction or it may permit slow

decompression of the colon when the obstruction is only partial.

No attempt will be made here to present a detailed account of the various operative procedures employed in the removal of carcinoma of the large bowel or to enter into a discussion of their relative advantages and disadvantages. Suffice it to say that at all times the object of the operation should be to remove all of the disease as widely as the anatomy permits with the sacrifice of nonvital structures whenever necessary. Resection of the mesentery should not be considered complete unless the last accessible lymph node of the chain has been obtained. In general, the one stage abdominoperineal rectal resection is the operative procedure of choice in carcinoma of the rectum. The two stage procedure which was primarily designed to minimize the incidence of shock now is used rarely. Attempts to spare the annal sphincter we believe have a definite place in the treatment of carcinomas high in the rectum and low in the sigmoid region. We do not believe that they are in-



Fig. 4. Large sigmoid polyp (benign) removed by colotomy. Also presents diverticulosis of descending colon.

dedicated whenever their accomplishment involves any compromise with the desired amount of bowel or node chain to be resected. We believe that all of the inferior mesenteric node chain should be removed for tumors in the upper rectum and rectosigmoid areas. If, after this has been accomplished, the descending colon can be anastomosed safely to an anal stump just above the level of the levator muscles, then something has been definitely ac-





## The magic wall

Nowhere in the realm of biology exists so highly specialized and so biologically efficient a membrane as the mucosa of the human intestinal tract. Within this mucous membrane, about five millimeters thick, there take place the most intricate biochemical reactions designed to facilitate absorption of the products of digestion.

Research upon the fundamental aspects of hemopoiesis has gone forward steadily at *Lederle* for more than 20 years. Liver extract,

FOLVITE\* Folic Acid, vitamins, combinations with ferrous iron, and such products of nutritional value in tissue repair as amino acids, have been made available as rapidly as they could be perfected.

*Lederle* research is proceeding actively in the field of the nutritional anemias, to the end that these almost completely preventable diseases may one day essentially disappear from daily clinical practice.

\*REG. U. S. PAT. OFF.

# LEDERLE LABORATORIES DIVISION

*AMERICAN Cyanamid COMPANY*  
30 ROCKEFELLER PLAZA • NEW YORK 20, N. Y.



## *home run*

### **A T V I T A M I N T I M E**

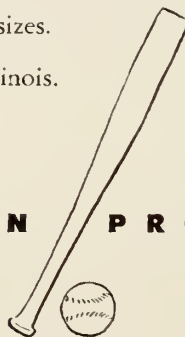
Important to every youngster, oldster and in-betweeners is this fact: the oral forms of Abbott Vitamin Products are made as attractive as possible in appearance, flavor and odor—for good reason. This plays an important role in influencing patients to adhere to prescribed dosage schedules. But even more important to you is the efficacy of the vitamin content. You may be sure that every Abbott Vitamin Product is pure, potent and stable, rigidly adheres to label claims for the contained vitamins.

In the complete Abbott line are single and multivitamin products . . . in liquid, capsule and tablet form . . . for oral and parenteral use . . .

for supplemental and therapeutic dosage. Your pharmacist can supply them in a variety of package sizes.

ABBOTT LABORATORIES, North Chicago, Illinois.

specify *abbott* **V I T A M I N P R O D U C T S**





complished without diminishing the chances for cure. In carcinomas arising in the sigmoid and above to the ileocecal junction, either primary anastomoses or exteriorization-resection procedures may be carried out. Objections that one or the other is more restrictive in its scope are invalid. The amount of bowel to be removed and the extent of node chains to be resected should be identical in both types of procedure. It would appear that the present day colon antiseptics aided by antibiotic therapy have largely removed many previously existing objections to primary anastomosis.

We have had considerable experience with palliative resections and have been aware of our own diminishing enthusiasm for them. The strongest argument for them would appear to be that one is not always certain, even in the face of rather convincing evidence, that the resection is actually being done palliatively. Frequently, one is forced to transect tissue within the confines of the pelvis having all of the gross characteristics of carcinoma only to be informed by the pathologist that it is inflammatory and to subsequently have the patient survive free of disease. We have also resected rectal and colon lesions, despite what was considered to be definite metastases lying within the substance of the liver, but without any later development of the supposed metastatic disease. On several occasions autopsies done on patients dying postoperatively have shown other conditions present within the liver, conditions which at operation were considered to represent definite metastatic carcinoma. It would, therefore, appear that the primary advantage of an attitude accepting palliative resection is to be gained from those instances in which the appraisal is incorrect, and that patients are salvaged by it who would be lost unless one adopted such an attitude. We have carried out what was considered to be palliative resection in approximately 16 per cent of our cases.

Within recent years there has been an increasing tendency to extend the resectability of carcinomas of the colon and rectum by the removal of adjacent structures to which the bowel tumor has become adherent.<sup>2</sup> We have been particularly interested in the possibilities for cure under such circumstances. On carefully examining the surgical specimen in fifty-five cases in which one or more additional structures were removed along with the tumor-containing bowel segment, it was found that in 41 per cent of the cases the sole ominous pathologic finding was the local extension of the disease. In other words, in 59 per cent there was no lymph node metastasis and no blood vessel or nerve involvement. It is also apparent on examining such specimens that the source of the attachment is almost invariably tumor and only rarely inflammatory in its nature, though often times a certain inflammatory element may accompany the tumor. Thus recurrence seems certain in such instances unless the procedure is extended. Recently Gilchrist and David<sup>3</sup> in reporting five year follow-up on a some-

what smaller series of cases were able to obtain a five year survival of 40 per cent in these extended resections. The mortality rate for resections of the colon and rectum has been diminishing constantly so that at the present time it is possible to carry out such procedures with a mortality rate in the neighborhood of 5 per cent. Careful attention to preoperative care; more frequent resort to transfusions preoperatively, during and following the procedure; as well as the liberal use of anti-

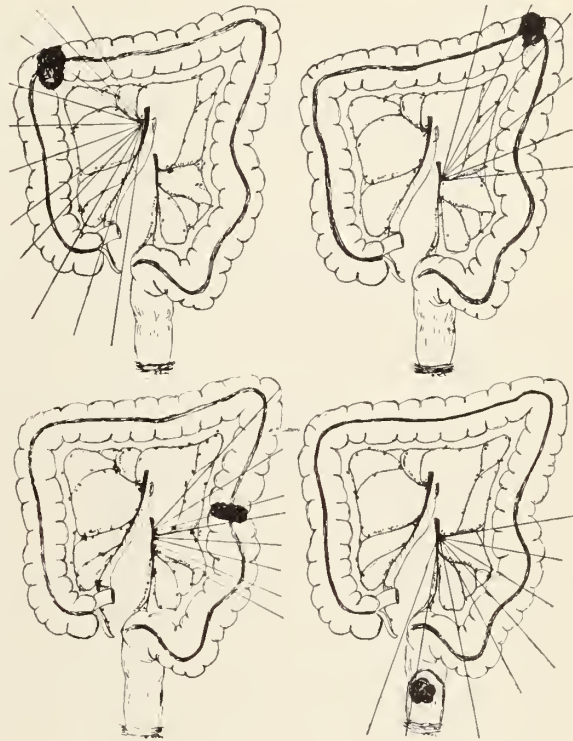


Fig. 5. Diagrammatic indications of what should be accomplished in the removal of cancers at various sites in the large bowel. In carcinoma of the cecum (not shown) the middle colic and ileocolic vessels are removed. Wide removal of the primary with any attached nonvital adjacent organs as well as removal of the entire draining node area always should be the primary aim of treatment.

biotics have been responsible largely for this reduction. The use of continuous spinal anesthesia, the employment of stainless steel wire in the closure of abdominal wounds and prophylactic superficial femoral vein ligation against subsequent thrombophlebitis have all exerted an additional beneficial influence.

#### PROGNOSIS AND END RESULTS

Insofar as actual cure to patients is concerned, perhaps more progress has been made in carcinoma of the colon and rectum in the last fifteen years than in the treatment of any other single group of tumors. This has been due to a steadily increasing operability, a steadily decreasing operative mortality and an increasing radicalness on surgical approach. At the present time operability figures are ranging in the neighborhood of from 75 to 80 per cent which means that approximately eight out of

every ten patients coming to exploration is being given the benefit of a removal of his tumor. It was not unusual just a few years ago, with low operability figures, to find mortality figures ranging around 25 to 30 per cent. At the present time, mortality figures are being reported commonly in the neighborhood of 10 per cent and it has not been unusual to see occasional series reported of one hundred consecutive cases without a single death. Five year survival figures also have risen considerably and vary from 55 to 65 per cent. It is sometimes difficult to determine in published reports whether all cases, even those which are obviously hopeless, are included and often times they obviously are not. However, it is probably safe to estimate that the overall cure rate for cancer of the colon and rectum under moderately favorable circumstances is approaching 35 to 40 per cent. There is, at present, no substitute for early diagnosis. When the tumor is still confined to the bowel wall and no node involvement is present, more than 90 per cent of patients will survive five years. When the tumor extends beyond the bowel wall but the nodes are still negative, about 65 per cent will survive five years. When node involvement is present, however, with or without complete wall invasion, the five year survival rate drops to about 20 per cent. Unfortunately, the patients making up each of the above mentioned groups is about 15 per cent, 36 per cent, and 49 per cent, respectively.

#### FUTURE ADVANCES

In consideration of the fact that an average period of from nine to twelve months elapses before proper treatment is instituted, that 30 per cent of rectal cancer and approximately 15 per cent of colon cancer is still being initially treated as some other condition in apparent ignorance of the true diagnosis and that only about 15 per cent of cases are arriving for treatment with disease still confined to the bowel wall, it becomes apparent that tremendous future strides are possible from the standpoint of earlier diagnosis alone. A second profitable line of endeavor in diminishing mortality from this disease has to do with the recognition and destruction of the precancerous colon lesions, namely polyps. More frequent resort to examining the stools for occult blood and more frequent proctoscopic and barium enema examinations, particularly in individuals at and past middle age, will readily accomplish their detection. Thirdly, one can look to still greater surgical accomplishments in the future. This will derive largely, as it has in the past, from a better understanding by the surgeon of the surgical pathology of these tumors. Through the painstaking work of several groups of individuals it now is known that the incidence of node involvement of cancer of the colon and rectum is in the neighborhood of 60 to 70 per cent and that it is not 25 or 30 per cent as formerly was believed. It also has been pointed out that occasional nodes will be involved at long distances from the primary tumor along the mesentery. This

means that mesenteric removal must always be done and that it must be accomplished widely if the patient is to be given all of the benefits that removal can offer him from that standpoint. Nor should all of one's efforts be focused on removal of the node chain alone. It is obvious that no patient will be cured unless all of the primary tumor also is removed, yet this aspect of the problem seems to have lagged somewhat behind that concerned with lymph node involvement. It has been found that in cancers of the rectum which are freely movable there is involvement of all layers of the bowel out to the fascia propria in approximately 27 per cent. Whenever any lesion is described as being other than freely movable, it is found that complete wall involvement has occurred in approximately 87 per cent. Whenever a colon tumor is fixed to an adjacent structure there is involvement through the serosa in 100 per cent. The importance of avoiding normal tissue planes and of removing adjacent structures is, therefore, emphasized even in the absence of firm fixation. It is our belief, especially in carcinomas of the rectum, that when adjacent structures can be removed easily this certainly should be accomplished. Such a statement would apply to portions of the posterior vaginal wall, prostatic fascia and, in many instances, the presacral fascia. If careful attention is paid to earlier diagnosis, more careful prophylactic treatment and more intelligent and more vigorous surgical treatment, the day should arrive when death from carcinoma of the colon and rectum will be exceptional.

#### SUMMARY

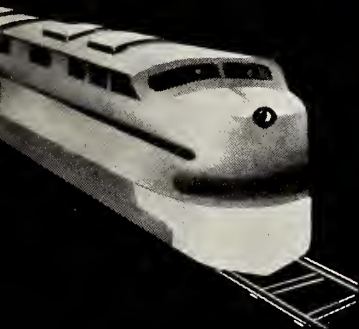
1. Carcinoma of the colon and rectum makes up about 10 per cent of all major malignant tumors seen.
2. There seems to be little doubt but that polyps are frequent precursors of these carcinomas.
3. The general clinical aspects of their pathology is discussed.
4. Carcinomas of the large bowel may mimic many less serious colon conditions for which reason they are being diagnosed much later than they should be.
5. Curative treatment depends on a wide removal of the primary and all draining node areas.
6. At present under favorable circumstances about 35 to 40 per cent of the entire group are being cured. Unquestionably better results will follow more careful attention to the treatment of polyps, earlier diagnosis and more radical removal of the primary with wider removal of the draining node chains.

503 E. High St.

#### BIBLIOGRAPHY

1. Helwig, E. B.: The Evolution of Adenomas of the Large Intestine and Their Relation to Carcinoma, *Surg., Gynec. & Obst.* 84:36, 1947.
2. Sugarbaker, E. D.: Coincident Removal of Additional Structures in Resections for Carcinoma of the Colon and Rectum, *Ann. Surg.* 123:1036, 1946.
3. Gilchrist, R. K., and David, V. C.: A Consideration of Pathological Factors Influencing Five-Year-Survival in Radical Resection of the Large Bowel and Rectum for Carcinoma, *Ann. Surg.* 126:421, 1947.





the difference  
is noteworthy  
**Trimeton**

(brand of prophenpyridamine)

TRIMETON\* differs from most other antihistaminic agents in not being a derivative of ethanolamine or ethylenediamine. This difference is noteworthy and is responsible for the gratifying clinical results obtained. In one study of 227 patients with various allergic conditions<sup>1</sup>

**83% obtained benefit from Trimeton**

Side effects, common to all antihistaminics, occur with TRIMETON, but only a few patients find that they cannot tolerate the drug.<sup>1</sup>

Relief from allergic symptoms is usually obtained with one TRIMETON 25 mg. tablet three times daily; in some patients half this dosage is sufficient. The action of TRIMETON lasts from four to six hours.<sup>2</sup>

**PACKAGING:** TRIMETON (1-phenyl-1-(2-pyridyl)-3-dimethylaminopropane) is available in 25 mg. tablets, scored, in bottles of 100 and 1000.

**BIBLIOGRAPHY:** 1. Brown, E. A.: Ann. Allergy 6:393, 1948. 2. Wittich, F. W.: Ann. Allergy 6:497, 1948.

\*TRIMETON trade-mark of Schering Corporation

**CORPORATION • BLOOMFIELD, NEW JERSEY**  
IN CANADA, SCHERING CORPORATION LIMITED, MONTREAL

*Schering*

TRIMETON



## PRACTICAL ASPECTS OF THE DIET IN PREGNANCY

R. NED WHITE, M. D., *Springfield, Mo.*

IN THE LAST few years there has been a marked increase in the interest in a correct diet during pregnancy. Many large maternity centers employ full time dieticians to do nothing but check the diet of each individual and attempt to bring it within normal limits. Neither the obstetrician, with a large number of pregnant women under his care, nor the general practitioner, with a large practice, can spare the time to go with great detail into the diet of each patient. Therefore, it seems important to crystalize the current beliefs into a concise manner so that all patients whether of average or low intelligence can remember and follow.

I like to tell my patients that there are three important needs to watch in their diet: (1) increased need for protein during pregnancy, (2) increased need for minerals, and (3) increased demand and need for vitamins. A patient can remember these if repeated to them on each of the first three visits. The patient should be told that after the fourth month she is to eat a generous serving of meat, fish or poultry each day and, during the last two months, it is to be increased to two servings each day. This will cover demand number one. For number two she is to drink four glasses of milk each day. For number three multiple vitamin preparation will meet that demand.

Later one can go into greater detail and explain that the protein need is approximately 50 per cent greater during pregnancy and that she may require as much as 100 grams per day. A quart of milk supplies about 32 grams of protein so is really a double barrel food in its importance. Four ounces of meat furnish about 24 grams and one egg about 6 grams of protein. So if they fail to take their milk then it requires almost 6 ounces of meat or five eggs to make up that need. With about 8 ounces of meat, fish or poultry, one egg, and one quart of milk the patient can maintain a good protein balance.

One should stress the fact that "red" meats in the latter months of pregnancy will help sustain a good blood level and that liver should be taken every few days. Of course, there are other sources of protein than meat but then one gets away from the average tastes, diets and simplicity. One can stress that it does not need come from the most expensive steak and roast cuts but can come from the inexpensive cuts. I believe with a little coaching ninety-nine out of every hundred can keep up a good protein balance without the need of an amino acid preparation.

The average patient, if left to their own whims, will not drink a quart of milk unless the need is shown and the value of milk as a two-fold food explained. There is a regrettable trend for patients to request calcium preparations rather than drink milk. Likewise, some doctors cut out milk the first

thing when the patients begin to gain too rapidly. The daily calcium requirement in pregnancy is around 1.5 grams. One quart of milk furnishes up to 1.2 grams and a good serving of green vegetable will bring it up to 1.3 or 1.5 grams. The problem in supplying calcium is not as simple as giving 1.5 grams of some calcium product. Assuming that the following are absorbed 100 per cent the amounts necessary to furnish 1.5 grams are, 11.5 gm. calcium lactate, 6.5 gm. dicalcium phosphate, 17 gm. calcium gluconate. The average calcium preparation contains about .5 gm., so the patient must take a handful of pills to supply what is needed.

The value of other dairy products should be stressed such as one good serving of butter or fortified margarine a day. The value of cheese and ice cream can be pointed out, but the caloric values need to be mentioned.

The use of iodized salt should be mentioned so that by force of habit the patient will purchase it each time. The importance of a green vegetable, citrus fruits and other fruit should be mentioned.

The daily vitamin requirements are raised about 50 per cent above normal needs. While most of this can be met if the patient eats a perfectly balanced diet, the chances are that she is not likely to do so. Whatever product that offers about twice the daily minimal requirements and the one that gives her this for the least cost is the one to use. I feel the less medicine she has to take the more likely she is to take it each day. The use of a glorified "shot-gun" capsule containing iron, calcium and vitamins is laudable, but when calculated in cost per entire pregnancy becomes almost prohibitive for most patients.

A look at the conjunctiva and nailbed offers a rough estimate of the hemoglobin and red count. Almost 50 per cent of patients will benefit by some iron preparation. It is explained that it is wished to raise their blood level as high as possible so that in case of any excess blood loss they are not placed in the precarious position of being anemic. Whatever form of iron that produces the least gastric irritation and will furnish about 1 gram of metallic iron is the one to use. Ferrous gluconate produces little gastric irritation but requires a much larger dose than ferrous sulfate. Molybdized ferrous sulfate gives little gastric irritation. It is my feeling that the use of desiccated liver, or a product with vitamins mixed with it is unnecessarily expensive. There is the occasional patient that requires liver, and this is best given by injection, or folic acid, but these can be individualized, and all not be required to pay for something that is not needed. With the vitamin preparation given them there is no need for a hematinic with vitamin in it.

How much weight should a patient gain? I do not feel that a hard and fast amount is wise or

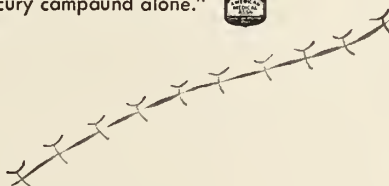


## "a summation of activity"

Council on Pharmacy and Chemistry, A. M. A.

J. A. M. A. 137:789 (June 26) 1948.

In Tincture Mercresin,\* secondary amyltricrosols and orthohydroxyphenylmercuric chloride "supplement each other so that the mixture is approximately twice as germicidal for *Staphylococcus aureus* as the component cresol derivatives alone and seven to ten times as germicidal as the mercury compound alone."



**Mercresin combines this germicidal potency with bacteriostatic and fungicidal properties for**

1. antiseptics of superficial wounds or infections,
2. irrigation of certain body cavities and deep infected wounds,
3. topical application to mucous membranes, and
4. prophylactic surgical preparation of intact skin.

# TINCTURE MERCRESIN

BRAND OF MERCOCRESOLS

Secondary-amyltricrosols 1/10%  
Orthohydroxyphenylmercuric Chloride..... 1/10%  
Acetone ..... 10%  
Alcohol ..... 50%

(Tinted): 2 oz., 4 oz., pint, and gallon bottles

(Stainless): 4 oz., pint, and gallon bottles

**Upjohn** FINE PHARMACEUTICALS SINCE 1886

KALAMAZOO 99, MICHIGAN

\*TRADEMARK. REG. U. S. PAT. OFF.

*Announcing Publication of*

# NEW FOURTH EDITION

## HANDBOOK OF MATERIA MEDICA TOXICOLOGY and PHARMACOLOGY

By FORREST RAMON DAVISON, B.A., M.Sc., Ph.D., M.B.

Consultant and Toxicologist, Minneapolis, Minnesota. Formerly, Assistant Professor of Pharmacology in the School of Medicine, University of Arkansas, Little Rock; Medical Department, The Upjohn Co., Kalamazoo, Michigan.

As in all previous editions, the purpose of this popular text is to present that information about drugs essential for the student of medicine and the practicing physician. In this, its Fourth Edition, all material has been thoroughly revised and brought up-to-date. It contains many profound changes in emphasis and subject matter.

The trend toward a closer correlation between the basic sciences, so prominent in present day medicine, is again reflected in this revision.

The essentials of pharmacy are presented in order to prepare the student to administer drugs intelligently. Prescription writing is again given prominence and the classification of drugs has been revised and simplified. Significant new drugs are discussed, including polymyxin, aureomycin, antihistamines, folic acid, rutin, BAL, antithyroid drugs, newer antimalarials, "nitrogen mustards," digitoxin, blood fractions, radioactive phosphorus, and many more. New information on hormones and also on vitamins is given.

### CONTENTS

#### The Basic Principles of Pharmacology

#### Materia Medica

#### Prescription Writing

#### Toxicology

#### Classification of Drugs

#### Drugs Acting on Skin and Mucous

##### Membranes

1. Emollients, Demulcents, Protectives, Irritants, Astringents
2. Carminatives, Bitters, Gastric Antacids, Digestants, Emetics, Expectorants, Adsorbents, and Cathartics

#### Antiseptics, Disinfectants, and Anti-Infectives

1. Antiseptics and Disinfectants
2. Anti-Infectives

#### Drugs Acting on the Central Nervous System

1. Stimulants; Depressants—General Anesthetics, Hypnotics, and Sedatives
2. Depressants (con'd)—Analgesics, Antipyretics, and Alcohols

#### Drugs Acting on the Peripheral Nervous System

1. Parasympathetic Nervous System
2. The Sympathetic Nervous System; Parasympathetic and Sympathetic Ganglia
3. Cerebrospinal Nervous System

#### Cardiovascular Drugs

#### Oxytocic Drugs

#### Diuretics

#### Biologicals

1. Vitamins
2. Serums and Vaccines
3. Blood, Blood Derivatives and Blood Substitutes
4. Hematinics
5. Hormones

#### Miscellaneous Drugs

730  
PAGES

35  
ILLUSTRATIONS  
WITH FOUR  
IN COLOR

Price  
\$8.50

*Use Coupon  
To Order*

The C. V. Mosby Company  
3207 Washington Blvd.  
St. Louis 3, Missouri

Mo 5-6-49

Please send me Davison Handbook of MATERIA MEDICA, TOXICOLOGY AND PHARMACOLOGY—The Price is \$8.50.

☐ Enclosed find check. ☐ Charge my account.

Name.....

Address.....





practicable. Eighteen, twenty, or twenty-four pounds are perhaps the most popular figures. A small girl weighing barely 100 pounds can well afford to gain 30 pounds and probably will retain little of this weight after delivery. The large girl, from 160 to 180 pounds, is the one that both retains any weigh over 20 pounds and gives increased incidence of toxemia and prolonged labor. Many of the excess weight gain patients are actually psychic problems. A few kindly questions often will reveal deep seated fears and anxieties such as their ability to raise a child, their fear of disaster at delivery, fear of a hard painful labor, fear of losing their physical and sexual attraction. A little reassurance helps a lot more than a lot of scolding or "stern father" attitude. If a patient still gains excessively I have no hesitancy on placing her on dexedrine, or some of the products containing dexedrine.

An appeal to the vanity will help some. An appeal to reason in explaining the greatly increased incidence of toxemia in those gaining excessively will help. The average American eats a lot more bread and potatoes than they realize. Usually getting patients to drop these two common articles of diet and increasing green vegetables will solve the problem. In others, desserts, drinks and carbonated beverages need be watched. One of course must be

cognizant of the difference of weight gain from obesity and water retention. It is always well to advocate the reduction of salt in the last trimester and here one may mention avoiding such foods as peanuts and pretzels as a source of excess salt.

I feel that the average patient should and can meet the needs of her increased requirements in the normal manner of correcting her diet. If one merely gives the patient a model diet one will be surprised how little attention she pays to it. If the physician briefly runs over the essential requirements and then interrogates her with some simple question such as, "Are you eating your meat, eggs, drinking your quart of milk, and taking your vitamins?" she will soon realize the physician feels it is important and she will make an effort.

#### SUMMARY

1. Proper diet is vitally important during pregnancy.
2. The greatest need is for more protein, minerals and vitamins.
3. With the possible exception of the vitamins the rest can be provided by the correction of the normal foods eaten, and this mainly by increases in meat, eggs and milk.

Professional Building.

---

#### A. M. A. RAISES STANDARDS OF GRADUATE MEDICAL TRAINING

The American Medical Association today announced approval of a residency specifically designed to train family doctors and new requirements for approval of hospitals for intern training.

Previously the A. M. A. Council on Medical Education and Hospitals had approved hospitals for general or mixed residencies, which were rather loosely organized training programs, for the purpose of providing additional experience following internship.

The residency for general practice will provide supervised training in the four major clinical divisions—internal medicine, surgery, obstetrics and gynecology, and pediatrics—as well as in the auxiliary services of anesthesiology, pathology and radiology.

Some 870 hospitals which the council had previously accredited for general residency training will be expected to reorganize their programs in accordance with the new requirements for the general practice residency, an editorial in the May 14 *Journal of the American Medical Association* says, emphasizing that the council's purpose is to encourage more young physicians to enter the field of general practice.

In the past doctors who did not intend to limit their work to a specialty have sought appointments to residencies in specialty fields because adequate facilities for a broader type of graduate training were not available, the editorial adds.

The council reemphasized the importance of a well organized program for intern training, stating that internships arranged merely to provide hospitals with resident personnel to assist in the clinical work of the hospital cannot be approved. It believes that a well organized internship of the rotating type, which provides training in the four major clinical divisions, is likely to provide the best basic training for both the future general practitioner and the future specialist.

While the majority of internships approved are now of one year's duration, the council recommended longer periods of service.

For the first time, the council suggested a method for determining the number of interns to be appointed. The bed capacity of the hospital is used as a basis, with a range of 15 to 25 beds per intern recommended. Although the council does not establish a specific number of interns to be appointed by approved hospitals, the hospitals will, no doubt, comply with this suggestion in organizing their programs, the editorial says.

Estimates indicate that 1,380 hospitals can meet the present quantitative requirements set up by the Council on Medical Education and Hospitals and hence have the potential to develop a program which will meet standards for approval by the council, according to the editorial. The number now approved for intern training is 807.

The council is making a survey of these 807 hospitals for the purpose of assuring prospective interns of satisfactory training.

The percentage of internships vacant has remained essentially unchanged since last year, the editorial reveals. The 807 approved hospitals offered 9,124 internships as of May 1, 1949, 9,118 internships in 1948. These hospitals reported that 19.7 per cent of the internships they offered were vacant in September, 1948, and 20.5 per cent were vacant in May, 1948.

"In considering the discrepancy between the number of internships offered and the number of physicians available for these positions, it should be remembered that the former figure measures the demand for interns by approved hospitals and not of necessity the actual need," the editorial points out. "These hospitals next year might well decide to offer 10,000 internships or 8,000, thereby increasing or decreasing the relative shortage.

"If all 1,380 hospitals become approved, 16,000 interns would be required to staff them. Such a supply of interns is not presently available, nor is it likely to be in the near future. The majority of these hospitals, accordingly, will have to continue to render the same high type of patient care without relying on interns."

## PRESIDENT'S PAGE

The Association has presented the results of a factual study regarding medical education to the Board of Curators of the University of Missouri. The study authorized by the Council at its meeting in January 1949 and approved by the



House of Delegates March 30, 1949, indicates that the logical place to establish the University of Missouri four year school of medicine is a large city such as Kansas City.

The study points out the great saving which would result by using the already available hospital facilities in Kansas City as well as the wealth of available clinical material; whereas, it would be necessary to build a hospital of at least 250 beds in Columbia and at the same time arrange to secure patients from other parts of the state in order to provide the necessary clinical material.

Attention is called to an article which appeared in the *Journal of the American Medical Association*, May 7, 1949, on page 8, written by H. G. Weiskotten, M.D., Chairman, Council on Medical Education and Hospitals of the American Medical Association. This article definitely supports the evidence presented to the Curators by the Council.

*Wallis Smith.*



# THE JOURNAL

of the

Missouri State Medical Association

623 Missouri Bldg. Telephone: Newstead 0404-05

Subscription . . . \$3.00 a year in advance

*Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent.*

JUNE, 1949

## EDITORIALS

### A. M. A. ASSESSMENT

Fifty-eight per cent of the members of the Missouri State Medical Association have paid the A. M. A. assessment. A recent report from the American Medical Association shows that Arizona leads with 80 per cent having paid, Hawaii second with 75 per cent and Iowa third with 73 per cent.

The percentage from Missouri probably is some better than the figure of 58 per cent shows because some members have paid directly to the American Medical Association and a complete tabulation of this has not been made. Also, there are some members who will not be expected to pay the assessment such as men who are retired and men who are in internships and residencies. However, these are not taken into account until a letter from the person or a county society is filed with the Association office requesting such exemption.

A tabulation by councilor districts and county societies in the districts of membership and the number who have paid the assessment appears in this issue of THE JOURNAL.

### DEATH RATES IN 1948

While deaths from all causes among ordinary life insurance policyholders were at a new low rate in 1948, deaths from heart disease accounted for more than half of the total, the Institute of Life Insurance reports. The heart disease death rate rose last year to a record high.

Total deaths per 100,000 were 625.1 in 1948, compared with 668.8 in 1946 and 751.2 in 1944. Deaths from the chief cardiovascular-renal diseases were 327.9 per 100,000 in 1948; 325.4 in 1946; and 324.1 in 1944. These include diseases of the heart, cerebral hemorrhage and nephritis and together represented 52 per cent of total deaths in 1948.

Cancer, second most important cause of death, accounted for 98.7 deaths per 100,000 last year, compared with 98.0 in 1946 and 92.7 in 1944.

Accidents had a death rate of 42.7 in 1948; 48.4 in 1946; and 52.4 in 1944. This improvement was shown even though motor vehicle accidents rose from 13.5 in 1944 to 18.2 in 1948.

Tuberculosis deaths declined to a record low rate of 11.4 per 100,000 in 1948, one third less than in 1944.

The 1948 experience among industrial insurance policyholders followed a similar pattern, but on a higher level, due to the difference in the types of business. Industrial insurance policyholders are not generally subject to medical examination when applying for policies.

In 1948, the deaths from all causes among industrial insurance policyholders were 771.9 per 100,000, compared with 834.4 in 1946 and 867.2 in 1944. The deaths from diseases of the heart in 1948 were 357.8 per 100,000, or 46 per cent of total deaths.

## NEWS NOTES

Robert F. Lamar, M.D., Kansas City, was the guest speaker at a meeting of the Clay County (Kansas) Medical Society at Clay Center on April 13. He spoke on "Special Anesthesia in Obstetrics."

E. Kip Robinson, M.D., Kansas City, spoke before the Kansas City Lions Club on April 4 on "Cancer."

E. A. Stricker, M.D., St. James, recently was reelected president of the St. James Chamber of Commerce.

Wade Miller, M.D., Kansas City, spoke on "Compulsory Health Insurance" before a meeting of the Linwood Chapter of the American War Dads on April 18. He spoke on the same subject before the Parent Teachers Association at the Raytown High School on April 7.

Emma A. Thompson, M.D., Breckenridge, was chosen the Missouri mother for 1949.

Delon A. Williams, M.D., Kansas City, spoke before the DeMolay Mothers at a meeting on April 8 on "Compulsory Sickness Insurance."

M. Pinson Neal, M.D., Columbia, was elected president of the Missouri Society of Pathologists at the organization meeting in Kansas City on March 27. Russell W. Kerr, M.D., Kansas City, was elected president-elect, and Henry C. Allen, M.D., St. Louis, was elected secretary-treasurer. The next meeting of the society will be held in Columbia at the time of the annual fall Tumor Seminar.

St. Louis Medical Society began a new radio broadcast over KMOX on May 14. It is given each Saturday at 2:15 p. m. Subjects of broadcasts in June are: June 4, "Cataract"; June 11, "Undulant Fever"; June 18, "Heat Exhaustion"; June 25, "Snake Bite."

Speakers who have appeared recently before lay groups under the auspices of the Committee on Health and Public Instruction are:

E. C. H. Schmidt, M.D., Kansas City, spoke before the Nevada Rotary Club, the High school and Cottey College on "Cancer."

Robert Dean Woolsey, M.D., St. Louis, spoke before a public relations luncheon of the Jefferson County Society Auxiliary at Festus on "Socialized Medicine."

Robert Mueller, M.D., St. Louis, spoke at the Greene County Health Forum in Springfield on "You Should Live Longer."

Wallis Smith, M.D., Springfield, President of the Association, spoke before a public relations tea given by the Auxiliary of the Phelps-Crawford-Dent-Pulaski County Medical Society at Rolla. His subject was "Socialized Medicine."

Mr. Hartley T. Pollock, St. Louis, Counsel for St. Louis Blue Cross, spoke before the Creve Coeur Township Republican Club in opposition to national compulsory health insurance.

## MUSINGS OF THE FIELD SECRETARY

A request came into the office the other day from a county seat town in rural Missouri desiring information on the cost of constructing a suitable building to furnish office space for a doctor and a dentist. Also desired was an approximation of the type and cost of equipping the doctor's office. The idea is to furnish the capital in the form of office and equipment to a physician who would establish a practice in this particular town. Arrangements could then be made by the physician to rent the set-up or buy and pay as he went along. This is a community thinking in terms of actually doing something about getting a physician on their own hook instead of waiting for someone else to bail them out of the river of need.

If some means could be devised to have a number of young physicians take a leisurely journey from Poplar Bluff to Springfield via Highway 60 at this time of year, it is safe to wager that some of them would be sold by nature on establishing their practice in some of the towns along the way. Incidentally, nature and all of her cohorts are more than welcome in exerting influence toward rural practice in this state.

Following a talk against socialized medicine before a civic club recently, a small group of the members were discussing the chances of the passage of a national compulsory health insurance bill by the present Congress. One of the discussants remarked that, in his opinion, the chances of such a bill ever being passed in the United States could be lessened greatly if more doctors assumed the attitude that there was now a buyers' instead of a sellers' market in reference to medical care.

## ORGANIZATION ACTIVITIES

### THE COUNCIL

The Council met at the Mark Twain Hotel, Hannibal, on May 7 and 8, 1949, with J. W. Thompson, M.D., St. Louis, Chairman, presiding. Those present were Drs. Donald M. Dowell, Chillicothe; W. F. Francka, Hannibal; J. W. Thompson, St. Louis; Otto W. Koch, Clayton; J. F. Jolley, Mexico; R. W. Kennedy, Marshall; C. Edgar Virden, Kansas City; E. C. Bohrer, West Plains; Frank W. Hall, Cape Girardeau; Wallis Smith, Springfield; C. E. Hyndman, St. Louis; W. A. Bloom, Fayette; R. E. Schlueter, St. Louis; H. E. Petersen, St. Joseph; Howard B. Goodrich, Hannibal; R. O. Muether, St. Louis; Mr. W. H. Bartleson, Kansas City; Mr. D. E. Caywood, Springfield; Mr. Lemoine Skinner, St. Louis; Mr. Raymond McIntyre, St. Louis; Mr. T. R. O'Brien, St. Louis.

### Purposes

Dr. Smith gave the purposes of the session as (a) plans for the Centennial Session of the Association in 1950; (b) discussion of the situation of the four year medical school; (c) federal legislation including socialized medicine; (d) resolutions referred to the Council by the House of Delegates.

### Veterans Administration Contract

Mr. O'Brien presented a letter from the Veterans Administration enclosing a renewal of the contract between the Administration and the Association. Upon motion of Dr. Peterson, it was voted to renew the contract.

### Advisory Committee to Division of Health

Upon presentation of a request that the Council appoint a committee which would serve in an advisory capacity to the State Division of Health, and upon motion of Dr. Koch, the Chairman was instructed to appoint a committee of three members to serve in this capacity.

### National Society for Medical Research

After brief discussion of the work of the Society, upon motion of Dr. Francka, it was voted to send the Society \$50.00 again this year.

### Alternate Delegate

The resignation of Dr. Mantz as alternate delegate to the A. M. A. was presented. After discussion it was left to the Chairman to appoint an alternate delegate in Dr. Mantz place.

### N. P. C.

A statement concerning the closing of the National Physicians Committee was read.

### Enlistments in Service

Mr. O'Brien read a letter from the Office of the Secretary of Defense which stated that seven physicians of the quota of fifty-nine from Missouri have applied for commissions.

### Committee on Poliomyelitis

A request for a committee of the Association on Poliomyelitis was presented. After discussion, upon motion of Dr. Petersen, the Chairman was instructed to appoint such a committee.

### Report of Field Secretary

Mr. McIntyre reported on various meetings which have been held in the state since the Annual Session,





if she is one

of your patients... The farm housewife whose work is truly never done may find that the distressing symptoms of the climacteric make the smallest chore an arduous project. She depends on your help to resume normal efficiency in the performance of her daily tasks as well as to maintain a positive outlook during this trying period.

"Premarin" offers a solution. Many thousand physicians prescribe this naturally-occurring, oral estrogen because...

1. Prompt symptomatic improvement usually follows therapy.
2. Untoward side-effects are seldom noted.
3. The sense of well-being so frequently imparted tends to quickly restore the patient's confidence and normal efficiency.
4. This "Plus" (the sense of well-being enjoyed by the patient) is conducive to a highly satisfactory patient-doctor relationship.
5. Four potencies permit flexibility of dosage: 2.5 mg., 1.25 mg., 0.625 mg., and 0.3 mg. tablets; also in liquid form, 0.625 mg. in each 4 cc. (1 teaspoonful).

# "PREMARIN"



While sodium estrane sulfate is the principal estrogen in "Premarin," other equine estrogens...estradiol, equilin, equilin, hippulin...are probably also present in varying amounts as water-soluble conjugates.

ESTROGENIC SUBSTANCES (WATER-SOLUBLE,  
also known as CONJUGATED ESTROGENS (equine))



**Ayerst, McKenna & Harrison Limited** 22 East 40th Street, New York 16, New York

including a meeting of the Cole County Medical Society on April 5; public relations meetings held by the Auxiliary at Festus on April 7 and at Rolla on April 8; a meeting of the 10th Councilor District at Kennett on April 20; a talk before the Kiwanis Club of Springfield on April 22; a meeting of about twenty counties at Nevada on April 28. He announced a meeting on May 19 of the 9th Councilor District at Rolla and on May 26 of the 2nd Councilor District at Moberly. It was reported that eight physicians had located in rural areas in the last month. Mr. McIntyre explained that the Missouri Health Council had arranged for exhibit space at the State Fair, April 21 to 28, and were offering exhibit space to organizations interested in health work.

Upon motion of Dr. Virden, it was voted to have an exhibit at the State Fair and to ask the Committee on Public Health and Instruction to assist in selecting and preparing the exhibit.

#### Handbook

After discussion of the resolution referred by the House of Delegates calling for a committee of three to prepare a handbook containing information and a listing of physicians in the State of Missouri, the Chairman appointed the following committee: Dr. Petersen, Chairman; Dr. Hall and Dr. Kennedy. The committee was asked to present plans for the book to the Council for approval.

#### Resolution on Location of Association Headquarters

The resolution referred to the Council by the House of Delegates on the relocation of the Association office in Jefferson City was discussed. The following committee was appointed to study this and report to the Council: Dr. Hyndman, Chairman; Dr. Francka and Dr. Bohrer.

#### Legislation

Mr. O'Brien reported that S. B. 200, regarding rebates, was in the Senate Committee on Education; that H. B. 286, regarding the hospital licensing law was in the House Committee on Civil and Criminal Procedure. He stated that other bills in which the Association had been interested were H. B. 49 on chiroprody; H. B. 54 regarding the qualifications of the director of mental health; two bills which dealt with the merit system; No. 262 on unemployment compensation which would change the law from employment of eight persons to three persons.

#### Resolutions Against Socialized Medicine

Mr. O'Brien reported various organizations who had passed resolutions opposing compulsory health insurance and pointed out the importance of such resolutions and asked that reports of such resolutions be reported to the Association office. He read letters from Congressmen in reply to the resolution which was adopted by the House of Delegates and sent to President Truman and to Congressmen.

#### Visual Aids in Talks

Mr. Skinner told of his attempts to locate material in connection with the Council's suggestion that slides or something of similar nature be in the Association office for assistance of physicians giving talks. Mr. Skinner said that nothing was available in the A. M. A. offices and suggested that the Missouri State Medical Association work out a series of strip slides for this purpose. He showed an illustration slides and a prepared talk by the Committee for the Nation's Health in support of socialized medicine.

#### Public Relations Work

In regard to continuing public relations work, the following committee was appointed to plan for the immediate time prior to the possibility of placing this before the Committee on Public Policy and Public Relations: Dr. Hyndman, Chairman, Dr. Virden and Dr. Muether. The committee was asked also to discuss with Mr. Skinner ways and means of supplying strip films for the members and to report back to the Council.

#### Treasurer's Report

The Treasurer reported on the financial status of the Association and, on motion, his report was accepted.

#### Four Year Medical School

After considerable discussion of the situation on the four year medical school, the material which Mr. Skinner has compiled and the joint resolution which has been introduced in the Senate asking for a commission to study the four year school, the following motion by Dr. Smith was adopted: That the Council present the factual information to Dr. Hendren to present and use before the Board of Curators and that it be released to the press at the same time. The following amendment to the motion was adopted: If further information is deemed necessary or clarification desired, a committee of the Council will appear before the Board, if requested.

After discussion Dr. Muether was requested to draw up a resolution introducing this subject.

The following resolution was adopted:

WHEREAS, Because of public need and in the interest of public health and in the furtherance of medical education, the Council of the Missouri State Medical Association reaffirms its belief that a four year medical school under the auspices of the University of Missouri is necessary, be it

*Resolved*, That factual information obtained in an impartial survey by the Council is of value to the Board of Curators and the public, therefore be it further

*Resolved*, That this factual information be made available to the Board of Curators of the University and to the public.

#### Centennial Session

It was suggested that since the next Annual Session would be the 100th anniversary of the Association, that the usual Committee on Arrangement of three be enlarged. The following were named as the General Committee on Arrangements: Drs. Thompson, Koch, Francka, Hall, D. L. Sexton, John F. Patton, R. E. Schlueter, Ralph E. Duncan, Wallis Smith, H. E. Petersen, W. A. Bloom.

#### History of Association

Dr. Schlueter was asked to prepare a history of the Association for use in connection with the Centennial Annual Session.

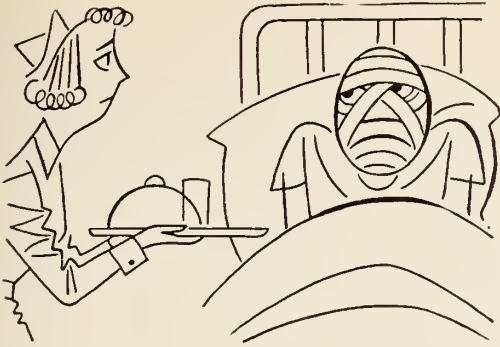
#### Medical Morbidity

A request from Dr. Lively of the Rural Sociology Department of the University of Missouri for financial assistance from this organization in a study being made on medical morbidity was referred to the Committee on Rural Medical Service for study and report.

#### Advisory Editorial Board

Upon the suggestion of Dr. Muether and on motion of Dr. Koch, Dr. Muether was authorized to set up an Advisory Editorial Board.





## Soft-diet patients down in the mouth?

### Perk up appetites with Swift's Strained Meats!



**6 varieties:**  
Beef, lamb, pork,  
veal, liver, heart

Simply putting soft foods on a tray is no assurance that patients will put them away. That's why so many physicians today are recommending Swift's Strained Meats—flavorful, real meats they're sure patients will eat! Prepared specially, soft and smooth, Swift's Strained Meats are so good they tempt even the most apathetic appetites!

Nutritionally, Swift's Strained Meats are an excellent base for a high-protein, low-residue diet. They're highly digestible—easy to eat. Rich in biologically

valuable proteins, they make available simultaneously all known essential amino acids—for optimum protein synthesis. Further, Swift's Strained Meats supply hemapoeitic iron and goodly amounts of natural B vitamins. Let protein-rich Swift's Strained Meats put palatability in menus for your soft-diet patients!

To vary patient's menus, six different Swift's Strained Meats: beef, lamb, pork, veal, liver, heart. Convenient—ready to heat and serve!

*The makers of Swift's Strained Meats invite you to send for the new physicians' handbook of protein feeding, written by a doctor, "The Importance of Protein Foods in Health and Disease." Send to:*

**SWIFT & COMPANY**

Chicago 9, Illinois



*All nutritional statements made in this advertisement are accepted by the Council on Foods and Nutrition of the American Medical Association.*



For patients who can take foods of less fine consistency—Swift's Diced Meats offer tender morsels of nutritious meats with tempting flavors patients appreciate.

**Committee on Awards**

It was pointed out by the Committee on Awards that it was difficult to select a practitioner from the state and term him the "Outstanding General Practitioner." Several suggestions were made concerning the honoring of several outstanding men at each annual session. Upon motion, the Committee on Awards was disbanded and the Chairman was instructed to appoint a secret committee, based on the procedure of the committee on the A. M. A.

**Location of Association Office**

The Committee appointed to study the resolution referred by the House of Delegates on moving the headquarters office to Jefferson City, recommended that the report of the Reference Committee on Resolutions of the House of Delegates be accepted; that is, that the time was not propitious for such a move. Upon motion of Dr. Hyndman, the report was accepted.

**Handbook**

Dr. Petersen reported that the committee had had some discussion and asked more instructions of the Council on the preparation of the Handbook. He stated that the committee would be prepared to give a report of progress at the next meeting of the Council.

**Assessment**

Dr. Smith spoke briefly concerning the urgency of members paying the A. M. A. assessment, and presented Councilors with reports of their districts on members who have paid.

**Dr. Francka Thanked**

Dr. Bloom addressed the session briefly and moved that Dr. Francka be thanked for the hospitality extended the Council. This motion was passed enthusiastically.

**Committee Report on Public Relations**

The committee reported that it considered the employment of Mr. Skinner to develop, under the auspices of the Committee on Public Policy and Public Relations, a group of visual aids with scripts for the Association members and recommended that the Executive Secretary negotiate the details with Mr. Skinner and that the compensation for the work be approved by the Chairman of the Council, the President and the Treasurer.

**Audrain County Hospital Petition**

The Board of Trustees of the Audrain County Hospital have filed a petition with the Audrain County Circuit Court asking that the Court determine the rights, powers and duties of the Board of Trustees in relation to who may practice in the Audrain County Hospital.

At the present time Doctors of Medicine only are permitted to practice in the hospital. The osteopaths are excluded at present by virtue of the opinion of the Attorney General, dated September 9, 1939, in which it is stated that the Board of Trustees may permit only a licensed doctor of medicine to practice in the hospital.

On motion, the Chairman of the Council was instructed to secure the necessary legal advice on the question.

**Committee on Publication**

The following Committee on Publication was named: Drs. Muether, Chairman, H. E. Petersen, V. T. Williams, M. D. Overholser and Paul O. Hagemann.

**MISCELLANY****A. M. A. ASSESSMENT**

Following is a report by Councilor District and by County Medical Society of the number who have paid the A. M. A. assessment as of May 5.

**District 1**

COUNTY	NUMBER MEMBERS	NUMBER PAID	NUMBER EXEMPTED
Andrew .....	6	3	
Buchanan .....	107	58	
Caldwell-Livingston ....	15	6	
Carroll .....	7	4	
Clay .....	37	19	
Clinton .....	9	6	
Grundy-Daviess .....	14	7	
Harrison .....	3	3	
Holt .....	5	2	
Mercer .....	10	5	
Nodaway-Atcheson- Gentry-Worth .....	26	10	1
Platte .....	5	1	
Ray .....	6	3	1
Total .....	250	127	2

**District 2**

Chariton-Macon- Randolph-Monroe ....	43	20	
Lewis-Clark-Scotland ..	6	4	
Linn .....	10	2	1
Marion-Ralls .....	29	18	
North Central .....	23	9	
Pike .....	12	5	
Shelby .....	4	1	1
Total .....	127	59	2

**District 3**

St. Louis City .....	1,348	751	22
----------------------	-------	-----	----

**District 4**

Franklin .....	30	15	3
Jefferson .....	15	7	
Lincoln .....	8	1	
St. Charles .....	21	16	
St. Louis County .....	270	137	3
Total .....	344	176	6

**District 5**

Audrain .....	14	8	
Boone .....	49	24	2
Callaway .....	17	15	
Camden .....	2	1	
Cole .....	36	17	
Cooper .....	12	7	
Howard .....	5	5	
Miller .....	4	4	
Moniteau .....	6	3	
Montgomery .....	5	2	
Morgan .....	3	3	
Total .....	153	89	2

**District 6**

Bates .....	9	3	
Benton .....	3	1	
Cass .....	14	7	2
Henry .....	16	6	
Johnson .....	13	7	1



# THROAT SPECIALISTS PROVE CAMEL MILDNESS IN 30-DAY SMOKING TEST



● In a recent coast-to-coast test, hundreds of men and women smoked Camels—and only Camels—for thirty consecutive days. They smoked on the average of one to two packages of Camels a day. Each week during the entire test period, the throats of these Camel smokers were examined by throat specialists. A total of 2,470 careful examinations were made. And after correlating these case histories, the throat specialists reported

**“NOT ONE SINGLE CASE OF THROAT  
IRRITATION due to smoking CAMELS.”**

#### MONEY-BACK GUARANTEE!

Try Camels and test them as you smoke them. If, at any time, you are not convinced that Camels are the best cigarette you've ever smoked, return the package with the unused Camels and you will receive its full purchase price, plus postage. (Signed) R. J. Reynolds Tobacco Co., Winston-Salem, N. C.



*According to a Nationwide survey:*

**MORE DOCTORS SMOKE CAMELS**  
*than any other cigarette*

When three leading independent research organizations asked 113,597 doctors what cigarette they smoked, the brand named most was Camel.

# WHEN OBESITY IS A PROBLEM



Clinicians have long noted that the forward bulk of the heavy abdomen with its fat-laden wall moves the center of gravity forward. As the patient tries to balance the load, the lumbar and cervical curves of the spine are increased, the head is carried forward and the shoulders become rounded. Often there is associated visceroptosis. Camp Supports have a long history among clinicians for their efficacy in supporting the pendulous abdomen. The highly specialized designs and the unique Camp system of controlled adjustment help steady the pelvis and hold the viscera upward and backward. There is no constriction of the abdomen, and effective support is given to the spine. Physicians may rely on the Camp-trained fitter for precise execution of all instructions.

If you do not have a copy of the Camp "Reference Book for Physicians and Surgeons", it will be sent on request.

**S. H. CAMP and COMPANY**  
**JACKSON, MICHIGAN**

*World's Largest Manufacturers  
of Scientific Supports*

Offices in New York • Chicago  
Windsor, Ontario • London, England



THIS EMBLEM is displayed only by reliable merchants in your community. Camp Scientific Supports are never sold by door-to-door canvassers. Prices are based on intrinsic value. Regular technical and ethical training of Camp fitters insures precise and conscientious attention to your recommendations.



COUNTY	NUMBER MEMBERS	NUMBER PAID	NUMBER EXEMPTED
Lafayette .....	18	12	
Pettis .....	33	10	1
Saline .....	21	13	
Vernon-Cedar .....	18	10	
Total .....	145	69	4

**District 7**

Jackson .....	654	428	8
---------------	-----	-----	---

**District 8**

Barton-Dade .....	12	4	1
Dallas-Hicky-Polk .....	12	8	1
Greene .....	114	74	
Jasper .....	71	40	2
Newton .....	14	2	
Ozarks County .....	40	15	3
Webster .....	3	3	
Total .....	266	146	7

**District 9**

Carter-Shannon .....	4	1	
Laclede .....	12	8	
Phelps-Crawford-			
Dent-Pulaski .....	29	12	
South Central .....	22	10	1
Total .....	67	31	1

**District 10**

Butler .....	22	4	1
Cape Girardeau .....	40	29	
Dunklin .....	27	20	
Mississippi .....	7	3	
New Madrid .....	8	4	
Pemiscot .....	14	9	
Perry .....	6	4	
St. Francois-Iron-Madison			
Washington-Reynolds..	37	20	
Ste. Genevieve .....	4	3	
Scott .....	16	9	
Stoddard .....	7	2	
Total .....	188	107	1

Total ..... 3,478      1,983      55

(See editorial, page 435.)

**THE MUNICIPAL ELECTION**

Under this caption appeared a commentary on doctors and politics in the April 22 issue of the *Weekly Bulletin of the St. Louis Medical Society*, signed "R. E. K." The article follows:

Another important civic function has just been performed by a little more than half the qualified voters of St. Louis—53 per cent to be exact.

A mayor, a comptroller and half of the Board of Aldermen were elected to inaugurate the policies, handle the finances, and enact the laws of the municipality.

The tremendous consequence of an election makes it difficult to understand why almost half of the electorate fails to exercise its rights at the polls.

Our Revolutionary War was fought to obtain for Americans the right to select their own office holders, and thus to make their own laws and to provide for the enforcement of those laws in the American way.

Following the Revolution the brains of a marvelous group of far seeing, liberty loving statesmen created

our Constitution which was to preserve, in time of peace, the rights that were so dearly won on scores of battlefields in time of war.

The Constitution Washington and his confreres handed down to us was pronounced by Gladstone "the greatest instrument ever struck off by the hand of man." It still remains that greatest instrument and in addition, is the brightest beacon light for liberty loving people over the entire world.

The one way, and the only way the Constitution can be preserved in all of its integrity is through an alert, an appreciative and a loyal citizenry.

The President on taking office swears to preserve, protect and defend the Constitution. The job is not his alone, nor is it the job of the Supreme Court or the Congress. It is the job of every elected official from president to constable, and therefore it is the job of all Americans of voting age since they are responsible for the election of that president and that constable.

It will serve no good purpose to single out present office holders in high places who do not have the qualifications necessary for a half way good job in the positions they hold. For the purpose of this exposition let it be admitted they are there.—Why are they there?—Because, on the one hand, a lot of unappreciative American citizens did not go to the polls to prevent their election, and on the other a lot of uninformed or venal voters did go to the polls and their votes put them there.

No one is more stupid than the man who worships a party label as a sacred thing, and votes for the proverbial "yellow dog" if he wears the label of his particular party.

Your editor is in a position to know that a large percentage of doctors hold themselves aloof from any political activity except the casting of an occasional vote.

They smugly boast that they are too clean for the dirty game of politics. They give evidence that it is beneath their dignity to know a precinct worker, a ward committeeman or the name of their alderman.

If they stopped to consider they would conclude that most of the errors in national, state and local political setups have their origin in the precinct or the ward where the doctor could be, and should be, a potent guiding factor.

Your editor has been close enough to the arena of practical politics to know what kind of men and what kind of machinery put over the candidate whose only qualification is that he is "a political right guy," or the measure that pays or will create a political debt.

As doctors we know preventive measures are far better and far cheaper than curative measures. By the same token we doctors know that the place to stop the destructive policies and poisonous philosophies that are destroying the form of government the Founding Fathers handed down to us is in the neighborhood unit where they have their primal origin.

It is my studied opinion that if doctors performed their duties as citizens with the same selfless ardor that animates them in their professional activities, they would have no cracked pot theories of government control of medicine to plague them now. All governmental health agencies would be conducted on a high plane of ethical efficiency instead of being pawns in the game of party politics.

We doctors are largely to blame for the troublesome mess in which we find ourselves. We have slept on our

rights and on our opportunities to protect those rights. A right not worth fighting for is not worth having.

We have not fought—we have not sacrificed—and unless we do, it will not be long until we do not have.

### GRASS ROOTS CONFERENCE

The fifth National Conference of County Medical Society Officers (Grass Roots Conference) will be held in Atlantic City, Sunday, June 5, in morning and evening sessions. R. B. Wray, M.D., Nevada, is Missouri state chairman for this session.

The morning session will be devoted to specific county medical society problems with panel discussions on (1) the problem of emergency calls; (2) indigent medical care plans; (3) the national education campaign. The last hour of the morning session will be devoted to questions on the national education campaign with Mr. Whitaker and Miss Baxter present to answer the questions.

The evening session will be open to all physicians and their wives and will feature talks by Mr. Clem Whitaker and the Honorable John L. McClellan, U. S. Senator from Arkansas.

### GREENE COUNTY RECEIVES PRAISE

The following appears in the April 30 issue of *The PR Doctor*:

"A key part of any organization's public relations program should be successful community relations. The Greene County Medical Society knows this and acts accordingly. Last January, trustees of the Springfield pension system discussed the need of a medical examining board of a permanent nature. In the past, medical examinations preliminary to retirement, and repeated annually during the retirement period, of members of the city's police and fire departments were given by paid city physicians. The city medical staff changed so frequently that problems developed. Newspapers devoted lengthy stories to the haphazard system.

"Seeing the need, the Greene County Society offered its services to the city to establish and maintain a permanent medical examining board. Doctors would serve voluntarily without pay. D. E. Caywood, executive secretary of the society, said the offer was made because it was a 'civic responsibility.'

"The people of Springfield liked the generous offer of the doctors, and so did the Springfield *News-Leader*, which said 'Our congratulations to the doctors for recognizing and accepting that responsibility.'"

### PREPAYMENT MEDICAL CARE

Report of the Council on Medical Service of  
the American Medical Association  
April 15, 1949

The rapid and orderly growth of voluntary prepayment medical and hospital care plans has been one of the striking and stimulating economic developments supported by American medicine during the last fifteen years. The initiating and propelling force of these plans was the medical profession acting through its local and state societies and later its national organization. This movement has attained national proportions. At the present time more than 30,000,000 people are covered by Blue Cross type hospital insurance and more than 10,000,000 by Blue Shield type medical care insurance.

This stimulus and the accumulated experience gained by these organizations have prompted many private insurance companies to enter this field, and they are making substantial contributions toward the accomplishment of the ultimate objective; namely, voluntary health insurance at a nominal cost for all the people in the United States. The total number of persons covered by all voluntary agencies is 55,000,000 for hospitalization and 37,000,000 for surgical or medical care.

The American Medical Association is not engaged in the insurance business and has no intention of giving a preferential standing to any one type of voluntary plan. The American Medical Association does believe, however, that it has a definite function to perform, that of evaluating any insurance plan presented to the people, thus protecting them as far as possible against unscrupulous or unsound plans. The American Medical Association further believes that the people should be free to purchase the type of health security they desire. To this end the Council on Medical Service has for the last four years critically examined various plans and has given its approval to numerous plans operating on a local or state basis. The Council has felt the need for a national organization which would act as a trade and coordinating agency for all medically sponsored plans.

Therefore it is recommended:

1. The formation of a national coordinating agency representing all qualified voluntary prepayment plans in accordance with the proposal made to the Board of Trustees by the Council on Medical Service, February 10, 1949.

2. That there shall be no official connection between the American Medical Association and the Associated Medical Care Plans. However, the American Medical Association will continue to approve or disapprove all voluntary medical care plans.

3. The recognition of AMCP as a trade organization of member plans and Blue Cross as occupying a similar position for voluntary prepayment hospital care plans.

4. The recognition of the responsibility of the American Medical Association to

A. Promote the principle of voluntary insurance by educating the people as to their need for such coverage and by obtaining full cooperation from state and county medical organizations in the local field.

B. Inform the American people of the availability of approved plans that propose to supply on a prepayment basis security against the economic hazards of serious illness.

### TUBERCULOSIS ABSTRACT

Issued Monthly by the National Tuberculosis  
Association, June, 1949.

Every argument used to encourage the examination of apparently healthy persons for the purpose of finding unsuspected tuberculosis gains added force when applied to college students. If tuberculosis is found among them in the early stage when it is more easily cured, future and potentially valuable citizens are saved for productive lives.

### TUBERCULOSIS AMONG COLLEGE STUDENTS

Modern tuberculosis case-finding technics applied to groups of apparently healthy people are productive of important, instructive and often startling results. Active and communicable cases of tuberculosis are not





## Further evidence of the safety of 'Benzedrine' Sulfate therapy

More data, showing that 'Benzedrine' Sulfate, in proper dosage, produced no toxic effects, have lately been published in a study by Caveness.<sup>1</sup>

He gave the drug for 14 consecutive weeks to 23 unselected hospital patients whose ages *averaged 65 years*. Daily dosages over the period ranged from 5 to 30 mg. The author observes:

"... no significant changes were noted in the cardiovascular, urinary, hematopoietic, or respiratory systems..."

From this study, it would appear that 'Benzedrine' Sulfate may be safely used in the treatment of depression in the aged.

*1. New York State J. Med. 47:1003*

# Benzedrine\* Sulfate

tablets • elixir

*(racemic amphetamine sulfate, S.K.F.)*

\*T.M. Reg. U.S. Pat. Off.



**one of the fundamental drugs in medicine**

*Smith, Kline & French Laboratories, Philadelphia*

infrequently found where there is no other evidence that anything is amiss. Fortunately, the majority of cases so discovered are in an early or a minimal stage of the disease, when the chances for rapid, complete recovery are best.

To no other population group are these statements of more importance than to college students. These young men and women are at the highest level of health, strength and vigor and from their ranks are recruited leaders for the various fields of human endeavor. From their ranks are also recruited many cases of tuberculosis.

For seventeen years the Tuberculosis Committee of the American Student Health Association has been promoting interest in tuberculosis among the institutions of learning in the United States. For more than ten of these years, all colleges have repeatedly been urged to develop a tuberculosis control program, and many have, although in some colleges tuberculosis still is not recognized as a serious threat to students.

The curve of college participation has shown an almost constant upward trend. For reasons that are not entirely clear, the 1947 returns show fewer programs reported. Each of the 885 institutions to which a questionnaire was sent was asked to return the questionnaire but only 311 replies were received, of which 259 reported a program.

In spite of lessened returns many cases of tuberculosis were discovered among college students. The total number of cases, presumably of the "reinfection" type, reported for 1946-47 was 630, and all but nine were found at colleges having anti-tuberculosis programs. In 1946-47, 590 arrested cases of tuberculosis were again permitted to resume their college work. They emphasize the fact that "they do come back."

#### Programs Employing the Tuberculin Test and X-Ray of Reactors

Colleges depending primarily upon the tuberculin test as their initial screening method numbered 105. Based on adequacy of data submitted, apparent proportion of student body tested and number of reactors x-rayed, twenty-four programs were roughly classified as "excellent," thirty-four as "good," thirty-three as "fair" and fourteen as "poor." A college has an "excellent" program when entering students are tuberculin tested and reactors among them x-rayed, and when, each year, upper classmen non-reactors are retested and reactors re-x-rayed.

In recent years an increasing number of colleges have reported the use of both the tuberculin test and the chest x-ray for all entering students. It is recommended that this combined procedure be employed wherever facilities permit.

For better results, and to insure greater uniformity, tuberculin testing should be done intradermally (Mantoux), using Purified Protein Derivative of tuberculin (P.P.D.) in two strengths. The first dose prepared according to directions, is 0.00002 milligrams. If no reaction occurs after 72 hours a second dose of 0.005 milligrams is given. Equally dependable results may be obtained if Old Tuberculin (O.T.) is used. The first dose, injected intradermally, is 0.1 milligram. When no reaction occurs after 72 hours a second dose of 1.0 milligram is given. Failure to react to the second dose of either P.P.D. or O.T. may be taken as evidence of freedom from tuberculosis infection.

#### Programs Using X-Ray Alone as a Screen

The main criterion for an excellent program was that all students were x-rayed annually. When this is done, most of the significant cases of tuberculosis will be found in a relatively short time.

Forty-seven colleges, distributed over twenty-three states, indicated that part or all of their x-ray program had been conducted by either the local tuberculosis association or one of the official health departments. One of the limitations of the x-ray is that it gives no certain proof either of tuberculous infection or tuberculous disease. Diagnosis may be made only after careful clinical study of a suspected case. Calcifications noted on chest films are not proof of previous tuberculous infection. Diagnoses have undoubtedly been ascribed to "healed childhood tuberculosis" when the true cause was *Histoplasma capsulatum*. One who reacts to tuberculin should have regular examinations, including chest x-ray, for evidence of active tuberculosis. Conversely, except in a few well recognized instances, the non-reactor does not have tuberculosis.

#### Program Participation by Non-Students

Students come in daily contact with other members of the college community which includes all of the college staff, the administration, the faculty and other employees. Any one of these may have tuberculosis. Students would have added protection if all college employees were examined.

Student health services are in the best possible position to inform vast numbers of young people about tuberculosis, and must be prepared to meet this challenge.

Tuberculosis Among College Students, Seventeenth Annual Report of the Tuberculosis Committee, Chairman, Max L. Durfee, M.D., American Student Health Association, for the Academic Year, 1946-1947, *The Journal-Lancet*, November, 1948.

## DEATHS

**Pryor, Harry Blackburn, M.D.**, Ashland, a graduate of the University of Louisville School of Medicine, 1911, member of the Boone County Medical Society; aged 62; died March 20.

**Walker, Grant D., M.D.**, Eldon, a graduate of the National University of Arts and Sciences, 1890; member and former president of the Miller County Medical Society; Fellow of the American Medical Association; age 82; died March 24.

**Urban, Emanuel T., M.D.**, St. Louis, a graduate of Washington University School of Medicine, 1902; member of the St. Louis Medical Society; aged 71; died April 11.

**Graves, William W., M.D.**, St. Louis, a graduate of the St. College of Physicians and Surgeons, 1888; honor member of the St. Louis Medical Society; Fellow of the American Medical Association; aged 84; died April 18.

**Rosenwald, Leon, M.D.**, Kansas City, a graduate of Marion-Sims College of Medicine, 1893; honor member of the Jackson County Medical Society; Fellow of the American Medical Association; aged 77; died April 21.

**Elz, Julius T., M.D.**, St. Louis, a graduate of St. Louis University School of Medicine, 1920; member of the St. Louis Medical Society; Fellow of the American Medical Association; aged 54; died April 22.

**Sanders, Clarence E., M.D.**, Kansas City, a graduate of the University of Kansas School of Medicine, 1907;



# COSMO CAUTERY COMPANY

4215 Virginia Ave.

St. Louis 11, Mo.

## COSMO CERVIX COAGULATOR

Cervical treatment by electro-coagulation with this unit is superior to other methods because the doctor can control the extent of coagulation and reach the deeply imbedded infections.

This unit will not create nauseating smoke and odor due to searing tissue and gives the doctor greater freedom of post-operative complications such as stenosis, excessive scar tissue, etc.

Furnished with leatherette carrying case and 3 interchangeable silver applicators for striping, spotting and puncturing.

## COSMO CAUTERY UNIT

Removal of verucca, nevi, etc., with a Cosmo Cautery Unit provides a gentle, effective office treatment with a minimum of patient discomfort.

The unit is easy to operate; technic requires no anesthetic; heat is controlled and device shockproof. Usable around eyes and hairline; will not cause scar tissue.

Furnished with leatherette carrying case and 5 interchangeable silver applicators. The applicators are graduated in sizes to handle various sized blemishes and assure even sloughing.



Only \$26.50  
Complete



Only \$22.50  
Complete

ONE YEAR GUARANTEE

Ask Your Dealer for Descriptive Literature

ST. LOUIS

A. S. Aloe Co.  
Hamilton-Schmidt Co.  
Edmund F. Hanley Co.  
Charles A. Schmidt Co.

KANSAS CITY

A. S. Aloe Co.  
Chas. Russell Co. Inc.  
Goetze-Niemer Co.

JOPLIN

Goetze-Niemer Co.

ST. JOSEPH

Goetze-Niemer Co.

# MILWAUKEE SANITARIUM

WAUWATOSA, WISCONSIN

## FOR NERVOUS DISORDERS

(Chicago Office— 1117 Marshall Field Annex  
Wednesday, 1-3 P. M.)

Maintaining the highest standards for more than a half century, the Milwaukee Sanitarium stands for all that is best in the care and treatment of nervous disorders. Photographs and particulars on request.

JOSEF A. KINDWALL, M.D.  
CARROLL W. OSGOOD, M.D.  
WILLIAM T. KRADWELL, M.D.  
BENJAMIN A. RUSKIN, M.D.  
LEWIS DANZIGER, M.D.  
RUSSELL C. MORRISON, M.D.  
G. CHARLES SUTCH, M.D.  
RAYMOND HEADLEE, M.D.  
ARTHUR J. PATEK, M.D., Consultant  
G. H. SCHROEDER, Business Manager

COLONIAL HALL—One of the 14 Units in "Cottage Plan."



honor member of the Jackson County Medical Society; Fellow of the American Medical Association; aged 64; died April 28.

**Willhelmy, Ellis W., M.D.**, Kansas City, a graduate of the University of Kansas School of Medicine, 1923; member of the Jackson County Medical Society; Fellow of the American Medical Association; aged 51; died May 5.

### COUNTY SOCIETY HONOR ROLL 1949

(Societies which have paid Dues for All Members and date placed on Honor Roll)

**Miller County Medical Society, December 8, 1948.**

**Camden County Medical Society, December 10, 1948.**

**Benton County Medical Society, December 14, 1948.**

**Ste. Genevieve County Medical Society, December 16, 1948.**

**Laclede County Medical Society, December 18, 1948.**

**Dallas, Hickory, Polk Counties Medical Society, December 23, 1948.**

**Carter-Shannon County Medical Society, December 30, 1948.**

**Lewis, Clark, Scotland Counties Medical Society, January 3, 1949.**

**Audrain County Medical Society, January 5, 1949.**

**Webster County Medical Society, January 8, 1949.**

**Harrison County Medical Society, January 10, 1949.**

**Mississippi County Medical Society, January 12, 1949.**

**Howard County Medical Society, January 15, 1949.**

**Henry County Medical Society, January 16, 1949.**

**Morgan County Medical Society, January 19, 1949.**

**Callaway County Medical Society, January 21, 1949.**

**Carroll County Medical Society, January 24, 1949.**

**Pettis County Medical Society, January 26, 1949.**

**Holt County Medical Society, January 29, 1949.**

**Cape Girardeau County Medical Society, February 1, 1949.**

**Bates County Medical Society, February 8, 1949.**

**Mercer County Medical Society, February 8, 1949.**

**Pike County Medical Society, February 9, 1949.**

**Clinton County Medical Society, February 15, 1949.**

**St. Francois-Iron-Madison-Washington-Reynolds Counties, February 18, 1949.**

**Montgomery County Medical Society, February 24, 1949.**

**South Central Counties Medical Society, February 28, 1949.**

**Perry County Medical Society, March 10, 1949.**

**Andrew County Medical Society, March 12, 1949.**

**Cass County Medical Society, March 15, 1949.**

**St. Louis County Medical Society, April 27, 1949.**

## SOCIETY PROCEEDINGS

### FOURTH COUNCILOR DISTRICT OTTO W. KOCH, CLAYTON, COUNCILOR

#### St. Louis County Medical Society

The St. Louis County Medical Society met April 27 at 8:30 p. m. in the Health Center, St. Louis County Hospital, with forty-seven members present.

A letter to the president from Dr. Curtis H. Lohr relative to the advisability of nominating one or more members of the Society for the Board of Freeholders dealing with Charter revision was read. On motion of Dr. N. S. Vitale, it was voted that the president appoint a committee to select one or more members of the Society as nominees for the Board of Freeholders.

Upon motion of Dr. E. R. Brown, it was voted that the second meeting in May be advanced to the third Wednesday in May and that no meeting be scheduled in June.

Upon motion of Dr. C. P. Dyer, the following amendment to the by-laws was adopted: Chapter X. Dues. Change amount under corresponding members from \$3.00 so that it will read "Corresponding Members, \$5.00."

Thomas Burford, M.D., St. Louis, spoke on "Chest Tumors," illustrating his presentation with lantern slides comprising photographs, x-rays and operative specimens. The speaker was given a vote of thanks.

Following the introduction of three applicants for membership, Drs. Franklin, Kotner and Gronau, the meeting adjourned for refreshments served by the entertainment committee of the Woman's Auxiliary.

ROBERT C. KINGSLAND, M.D., Secretary.

### SIXTH COUNCILOR DISTRICT

#### R. W. KENNEDY, MARSHALL, COUNCILOR

Fifty physicians and guests attended an evening dinner meeting of the Sixth Councilor District on April 28 at the Mitchell Hotel, Nevada. Nevada druggists were hosts at a social hour which preceded the dinner and scientific program.

An interesting and informative discussion of "Pelvic Endometriosis" was presented by Harold L. Gainey, M.D., Kansas City.

Wallis Smith, M.D., Springfield, President, gave those present a number of things to think about in a brief but to the point explanation of problems confronting medicine in Missouri.

Walter Tillman, M.D., Bolivar, secretary of the Missouri Academy of General Practice, did credit to that organization in explaining its development, objectives and functions.

R. W. Kennedy, M.D., Marshall, Councilor, was on hand as usual, clearly indicating his constant desire to serve his District well.

The Vernon-Cedar County Medical Society enjoyed the opportunity to be host for this excellent meeting.

The attendance of a number of physicians from the Tenth Councilor District was appreciated.

R. B. WRAY, M.D., Secretary,  
Vernon-Cedar County Medical Society.

### NINTH COUNCILOR DISTRICT

#### E. C. BOHRER, WEST PLAINS, COUNCILOR

#### South Central Counties Medical Society

The South Central Counties Medical Society met at



# A BIG TIME-SAVER FOR EVERY DOCTOR



This handy booklet for new mothers was "built to doctors' orders". It contains blank forms for filling in your instructions and formulas.

It provides a permanent case-history record. A memo will bring you a sample...or as many as you want for your daily practice... without obligation.

Many doctors are prescribing "Daricraft Homogenized Evaporated Milk". It is always uniform, safe, sterilized, easy to digest, and high in food value and minerals. Daricraft contains 400 U. S. P. units of Vitamin D per pint.



PRODUCERS CREAMERY CO., SPRINGFIELD, MO.

Advertisement



From where I sit  
*by Joe Marsh*

## Remember How We Talked?

*It went like this at the Hooper's last night. Hap's eighteen-year-old daughter is talking about "a real gone guy—solid—out of this world, but def."*

"Now what kind of language is that supposed to be?" Hap barks. "Can't she speak English?"

"I'll translate it for you," Ma Hooper says, "in the language of the twenties, when you were about twenty years old. She simply means this fellow is the 'cat's whiskers.' Remember how we used to talk sometimes?" Hap went back to reading his newspaper.

From where I sit, it's easy to criticize the other person when we don't take a good long look at ourselves. Sure, there'll always be some differences. I'm fond of a temperate glass of beer and maybe you would prefer ginger ale—but let's just live and let live. Because when we go out of our way to find things to find fault with in others, chances are they can find a few in us.

*Joe Marsh*

Copyright, 1949, United States Brewers Foundation

the El Patio Hotel in Cabool on April 15 for dinner with the following members and guests present: Drs. L. T. Van Noy, Norwood; R. A. Ryan, R. W. Denney, H. G. Frame, S. W. Connor and A. C. Ames, Mountain Grove; Garrett Hogg, Jr, Cabool; T. J. Burns, Hous-ton; Leslie Randall, Licking; R. E. Musser, Willow Springs; E. C. Bohrer, and Rollin H. Smith, West Plains; C. W. Cooper, Thayer; A. H. Conrad, St. Louis.

After dinner the program was taken up in the office of Dr. Hogg where minutes of the last meeting were read and approved.

The offer of a motion picture film on "Cancer Diag-nosis" recommended by the A. M. A. was presented and the secretary was instructed to secure it for the meet-ing at Mountain Grove in July.

Dr. Conrad showed some excellent pictures of com-mon skin diseases and gave some timely instruction as to treatment.

A. C. AMES, M.D., Secretary.

#### TENTH COUNCILOR DISTRICT

FRANK W. HALL, CAPE GIRARDEAU, COUNCILOR

The Dunklin County Medical Society was host at an evening dinner meeting of the Tenth Councilor Dis-trict on April 20 at the Harris Cafe, Kennett.

A fellowship and social hour preceded the dinner and scientific program.

The forty physicians present were treated to valu-able discussions by O. J. Gibson, M.D., Cape Girardeau, and A. M. Estes, M.D., Jackson. Dr. Gibson spoke on "Toxemias of Pregnancy" and Dr. Estes on "Coronary Heart Disease."

E. L. SPENCE, M.D., Secretary,  
Dunklin County Medical Society.

#### St. Francois-Iron-Madison-Washington-Reynolds County Medical Society

The St. Francois-Iron-Madison-Washington-Reynolds County Medical Society held its regular monthly meet-ing on April 28 at the State Hospital No. 4, Farmington.

Alvin E. Vitt, M.D., St. Louis, spoke on "Common Prostatic Disorders." This was followed by a lengthy general discussion of the subject.

Following a short business session, refreshments were served by the Woman's Auxiliary.

The following members were present: Drs. Van Tay-lor, Harry Roebber and Marvin T. Haw, Jr., Bonne Terre; M. Grossman and W. Harry Barron, Frederick-town; G. L. Watkins, G. L. Watkins, Jr., F. R. Crouch,

S. A. Lansafame and E. F. Hctor, Farmington; C. H. Appleberry, Flat River; J. L. Foster and H. C. Gaebe, Desloge.

MARVIN T. HAW, JR., M.D., Secretary.

### BOOK REVIEW

**SYNOPSIS OF PATHOLOGY.** By W. A. D. Anderson, M.D., Professor of Pathology and Bacteriology, Marquette University School of Medicine; Pathologist, St. Joseph's Hospital, Milwaukee, Wisconsin; Formerly Associate Professor of Pathology, St. Louis University School of Medicine. With 327 Text Illustrations and 15 Color Plates. The C. V. Mosby Company, St. Louis. 1946. Price \$6.50.

This text, the second edition, is well known in the field of pathology. This edition represents improvement of previous printings inasmuch as certain chapters have been revised and amplified. The portions of the book dealing with viral spirochetal mycotic and several others have been encouraged. That portion of the book dealing with the nervous system likewise has been re-vised and amplified.

The book, as the title states, represents a concise classification and discussion of modern pathology and represents a bridge between basic textbooks of pathol-ogy and the larger texts of pathology.

Adequate references are given in the conclusion of each chapter and numerous photographs are present throughout.

The book is well written and it is the opinion of the reviewer that it is an excellent text for the general practitioner.

A. E. U.

**LABORATORY C&B REAGENTS**

**Inorganic and Organic Chemicals**  
**Biological Stains • Solutions**  
**Chemical Indicators • Test Papers**

*Distributed by*  
**Physician and Laboratory Supply Houses**

**The COLEMAN & BELL COMPANY, Inc.**  
MANUFACTURING CHEMISTS NORWOOD, OHIO, U. S. A.

**COLEMAN & BELL** *Norwood, Ohio*

One main OBJECTIVE in buying Disability Insurance is to have it in force AFTER YOU ARE UNINSURABLE.

Only NON-CANCELLABLE policies measure up to that objective sufficiently for the careful buyer.

C. E. HOVEY, General Agent

**MASSACHUSETTS INDEMNITY**  
 SAINT LOUIS

**NON-CANCELLABLE**

**INCONTESTABLE**

**GUARANTEED RENEWABLE to 60 or 65**





## OPTIMUM PROTECTION IN ONE PACKAGE...

The experience of competent clinicians clearly establishes that optimum protection is afforded the patient by the combined use of an occlusive diaphragm and a spermatocidal jelly.

By specifying the

**Ramses**  
TRADEMARK REG. U.S. PAT. OFF.

### PRESCRIPTION PACKET NO. 501

the physician provides optimum protection in one convenient package.

#### COMPLETE LITERATURE ON REQUEST

"RAMSES"\* Prescription Packet No. 501 . . . Contains a "RAMSES" Flexible Cushioned Diaphragm of the prescribed size, a "RAMSES" Diaphragm Introducer of corresponding size, and a tube of "RAMSES" Vaginal Jelly.

"RAMSES" Vaginal Jelly is accepted by the Council on Pharmacy and Chemistry of the American Medical Association. The "RAMSES" Diaphragm and Diaphragm Introducer are accepted by the Council on Physical Medicine of the American Medical Association.

*gynecological division*

**JULIUS SCHMID, INC.**

423 West 55th Street, New York 19, N. Y.

*quality first since 1883*



\*The word  
"RAMSES"  
is a registered  
trademark of  
Julius Schmid, Inc.



Active Ingredients of "RAMSES" Vaginal Jelly: Dodecaethylenglycol Monolaurate, 5%; Boric Acid 1%; Alcohol 5%.



## He started retiring today!

### ... and it feels good!

It's going to take time, but the point is . . . he's taken that all-important *first step* . . . he's found a way to make saving a sure, automatic proposition . . .

*He's buying Savings Bonds, the safest investment there is, through the Payroll Savings Plan!*

*This makes saving an absolute certainty!* You don't handle the money to be invested . . . there's no chance for it to slip through your fingers and . . . U.S. Savings

Bonds pay you 4 dollars for every 3 invested, in ten years!

*Think it over!* We believe you'll agree that bonds are the smartest, surest way there is to save.

Then—sign up for the Payroll Savings Plan yourself, today! Regardless of your age, there's no better time to start retiring than *right now!*

**P. S.** If you are not eligible for the Payroll Savings Plan, sign up for the Bond-A-Month Plan at your bank.

*Automatic saving is sure saving — U.S. Savings Bonds*



Contributed by this magazine in co-operation with the Magazine Publishers of America as a public service.



*when*

M

*ilk becomes*

*a dietary dilemma*

**Problem:** When casein or other animal protein sensitivity renders all natural or processed milks\* contraindicated in the pediatric dietary, because of eczematous, gastro-intestinal or other reactions, how can allergy be avoided and proper infant nutrition still be maintained?

**Solution:** Replace milk with Mull-Soy, the liquid hypoallergenic soy food—completely free of offending animal proteins. Mull-Soy is a biologically complete vegetable source of all essential amino acids, and closely approximates whole cow's milk in fat, protein, carbohydrate, and mineral content when diluted 1:1 with water. It is quickly prepared, palatable, easily digested and well-tolerated—equally desirable for infants, children or adults.

\*Goat's milk and processed cows' milk have unmodified casein factors.

**BORDEN'S PRESCRIPTION PRODUCTS DIVISION**

350 MADISON AVENUE, NEW YORK 17, N. Y.

In Canada write The Borden Company, Limited, Spadina Crescent, Toronto



M

Mull-Soy is a liquid hypoallergenic food prepared from water, soy flour, soy oil, dextrose, sucrose, calcium phosphate, calcium carbonate, salt, and soy lecithin; homogenized and sterilized. Available in 15½ fl. oz. cans at all drugstores.



*ull-soy*

When Milk becomes  
"Forbidden Food"



Your instructions faithfully executed. Qualified, courteous orthopaedic technicians.

•

**THE  
W. E. ISLE  
COMPANY**

ENTIRE SECOND FLOOR  
1121 GRAND AVE.  
KANSAS CITY, MO.  
VICTOR 2350

Braces

PARALYSIS  
AND  
FRACTURE  
BRACES  
MADE TO  
ORDER

## Mullen Ambulance Company

PRIVATE AMBULANCE  
SERVICE

Local and Distant Trips  
Day or Night

5159 Delmar, ST. LOUIS      Forest 1913

The Neurological Hospital,  
2625 The Paseo, Kansas City,  
Missouri. Operated by the Rob-  
inson Clinic, for the care and  
treatment of nervous and men-  
tal patients and associated  
conditions.

## FAITH HOSPITAL

A. J. SIGNORELLI, M.D.,  
*Medical Director*

Goodfellow 6262

2800 N. Taylor, St. Louis, Mo.

## The Norbury Sanatorium

Established 1901—Incorporated—  
Licensed—Jacksonville, Illinois

• ALBERT H. DOLLEAR, B.S., M.D., Superin-  
tendent. FRANK GARM NORBURY, A.M., M.D.,  
Medical Director. SAMUEL N. CLARK, M.D.,  
Physician. HENRY A. DOLLEAR, M.D., Physician.



### Maplecrest

• Pictured above — Restful, congenial home-  
like surroundings are combined with the most  
modern diagnostic and therapeutic equipment.



### Maplewood

• Pictured at left — Most comfortable homes  
for individuals requiring rest, scientific diagnosis  
and treatment. Fireproof construction.



## City View Sanitarium

For the diagnosis and treatment of mental and nervous disorders, alcoholism and drug addictions.

Established in 1907 by the late John W. Stevens, M.D. 52 acres near city. Separate buildings for men and women. Two full time psychiatrists. Electric shock and insulin therapy in selected cases. Occupational therapy. Physiotherapy department. Adequate laboratory facilities.

NASHVILLE, TENNESSEE



## The Mary E. Pogue School

Complete facilities for training Retarded and Epileptic children educationally and socially. Pupils per teacher strictly limited. Excellent educational, physical and occupational therapy programs.

Recreational facilities include riding, group games, selected movies under competent supervision of skilled personnel.

Catalogue on request.

G. H. Marquardt, M.D. Barclay J. Macgregor  
Medical Director Registrar

27 Geneva Road, Wheaton, Illinois  
(Near Chicago)

# Specific Hyposensitization in Pollinosis

**PRESEASONAL  
TREATMENT**

**75 to 85%** successful  
*in securing comfort and relief*

Order your choice of Arlington's  
Pollen Diagnostic and Treatment  
Sets now . . . and have ample time to  
complete your treatment schedules.

*Arlington*

**THE ARLINGTON CHEMICAL COMPANY**  
YONKERS 1, NEW YORK

### DIAGNOSTIC AND TREATMENT SETS

#### State Pollen Diagnostic Sets (\$7.50)

Dry pollen allergens selected according to state; 1 vial house-dust allergen. Material for 30 tests in each vial.

#### Stock Treatment Sets (\$7.50)

Each consisting of a series of dilutions of pollen extracts for hyposensitization, with accompanying dosage schedule. Single pollen or a choice of 21 different mixtures. Five 3-cc. vials in each set—1:10,000, 1:5,000, 1:1,000, 1:500, and 1:100 concentrations.

#### Special Mixture Treatment Sets (\$10.00)

Mixtures of pollen extracts specially prepared according to the patient's individual sensitivities. Ten days' processing time required.

Arlington offers a full line of potent, carefully prepared, and properly preserved allergenic extracts for diagnosis and treatment—pollens, foods, epidermals, fungi, and incidentals.

*Literature to physicians on request.*

## ACCIDENT • HOSPITAL • SICKNESS

**INSURANCE**

For Physicians, Surgeons, Dentists Exclusively



<b>\$5,000.00 accidental death</b>	<b>\$ 8.00</b>
\$25.00 weekly indemnity, accident and sickness quarterly	
<b>\$10,000.00 accidental death</b>	<b>\$16.00</b>
\$50.00 weekly indemnity, accident and sickness quarterly	
<b>\$15,000.00 accidental death</b>	<b>\$24.00</b>
\$75.00 weekly indemnity, accident and sickness quarterly	
<b>\$20,000.00 accidental death</b>	<b>\$32.00</b>
\$100.00 weekly indemnity, accident and sickness quarterly	

Also Hospital Expense for Members  
Wives and Children

85c out of each \$1.00 gross income used for  
members' benefit

<b>INVESTED ASSETS</b>	<b>PAID FOR CLAIMS</b>
<b>\$3,700,000.00</b>	<b>\$15,700,000.00</b>

\$200,000.00 deposited with State of Nebraska  
for protection of our members.

Disability need not be incurred in line of duty—benefits  
from the beginning day of disability

**PHYSICIANS CASUALTY ASSOCIATION**  
**PHYSICIANS HEALTH ASSOCIATION**

47 years under the same management

400 First National Bank Building, OMAHA 2, NEBR.

## All worth while laboratory examinations; including—

Tissue Diagnosis

The Wassermann and Kahn Tests

Blood Chemistry

Bacteriology and Clinical Pathology

X-Ray including Gastro Intestinal Study and  
Gall Bladder Visualization

Basal Metabolism

Pregnancy Test

Electrocardiograms with interpretation

## National Pathological Laboratory

RALPH L. THOMPSON, M.D., Director

601-616 University Club Bldg.

ST. LOUIS

Telephone Jefferson 6088



## North Shore Health Resort

Winnetka, Illinois

*on the Shores of  
Lake Michigan*

A completely equipped sanitarium for the care of  
*nervous and mental disorders, alcoholism and drug addiction*  
offering all forms of treatment, including electric shock.

**SAMUEL LIEBMAN, M.S., M.D.**

*Medical Director*

225 Sheridan Road

Phone Winnetka 211





A complete line for clinical laboratories devoted to all branches of chemistry, bacteriology, hematology, and parasitology. Tested and checked in our own clinical laboratories. Purity warranted. Our facilities assure prompt shipment of large or small orders. Inquiries invited.

## COMPLETE CATALOG

Reagents catalogued alphabetically—also according to subjects and techniques, plus medical reference guide. Catalog comprises full line blood testing sera including anti-Rh, anti-M and anti-N; also reagents for Wassermann, Kline, and Kahn tests. Write for your copy. FREE ON REQUEST.

and Medical  
Reference  
Guide



# GRADWOHL LABORATORIES

R. B. H. Gradwohl, M. D., Director  
3514 Lucas Av. St. Louis, Mo.

# HANDICAPPED?



## His Hanger leg is no handicap!

"I have played on softball teams, was chosen as a member of the All-Star team, play tennis, and enter into any games that I would had I not been wearing an artificial limb," says O. D. Stone, Hanger wearer in Texas. Not all wearers of Hanger Limbs can jump as Mr. Stone does above. But Hanger wearers **can** and **do** walk comfortably, safely, and satisfactorily, and perform everyday activities. Hanger Limbs allow the amputee to return to daily life as a living and working individual.

# HANGER

 ARTIFICIAL LIMBS

1912-14 Olive Street  
St. Louis 3, Missouri



One of Four Main Buildings

# GLENWOOD SANATORIUM

A Private Hospital for Care of Nervous and Mental Disorders, Alcohol and Narcotic Addictions.

Thoroughly equipped for all the approved therapeutic measures. Insulin, metrazol and electro shock used in selected cases.

Four main buildings for patients permit ample classification facilities. Large grounds composed of about fifty acres make many out-of-door activities possible.

Phone WEBster 1056

Visiting Consultant  
**W. W. GRAVES, M.D.**  
Visiting Neuropsychiatrist  
**SYDNEY B. MAUGHS, M.D.**

Medical Superintendent  
**PAUL HINES, M.D.**  
Resident Physicians  
**RICHARD J. HESSBERG, M.D.**  
**LEROY J. DIERKER, M.D.**

For full information, address

**PAUL HINES, M.D., Medical Superintendent, Webster Groves, St. Louis 19, Mo.**

## COMMERCIAL ANNOUNCEMENTS

**WANTED:** M. D. trained in Obstetrics and Pediatrics to join new clinic now being organized—central Iowa town of 7,500—new air conditioned ground floor offices. Address Box 163, Missouri State Medical Association, 623 Missouri Bldg., St. Louis 3, Mo.

**FOR SALE:** Nine room clinic with or without equipment. Located in one of the fastest growing cities of 20,000 population. A very good opening for internal medicine. A good man can gross twenty to thirty-five thousand per year. Don't apply unless you mean business. Write P. O. Box 357, Blytheville, Arkansas.

### THE STOKES SANITARIUM 923 Cherokee Road, Louisville, Kentucky

Our ALCOHOLIC treatment destroys the craving, restores the appetite and sleep, and rebuilds the physical and nervous condition of the patient. Liquors withdrawn gradually; no limit on the amount necessary to prevent or relieve delirium.

MENTAL patients have every comfort that their home affords.

The DRUG treatment is one of gradual Reduction. It relieves the constipation, restores the appetite and sleep; withdrawal pains are absent. No Hyoscine or rapid withdrawal methods used.

NERVOUS patients are accepted by us for observation and diagnosis as well as treatment.

E. W. STOKES, Medical Director. Established 1904  
Telephone—Highland 2101

### Cook County Graduate School of Medicine Announces Continuous Courses

**SURGERY**—Intensive Course in Surgical Technique, two weeks, starting June 20, July 25, August 22.

Surgical Technique Surgical Anatomy and Clinical Surgery, four weeks, starting July 11, August 8, September 12.

Surgical Anatomy and Clinical Surgery, two weeks, starting June 20, July 25, August 22.

Surgery of Colon and Rectum, one week, starting June 13, September 12.

Esophageal Surgery, one week, starting October 10.

Thoracic Surgery, one week, starting June 20. Breast and Thyroid Surgery, one week, starting June 27.

Fractures and Traumatic Surgery, two weeks, starting June 13.

**GYNECOLOGY**—Intensive Course, two weeks, starting June 20, September 26.

Vaginal Approach to Pelvic Surgery, one week, starting June 13, September 19.

**OBSTETRICS**—Intensive Course, two weeks, starting September 12.

**MEDICINE**—Intensive General Course, two weeks, starting June 13.

Gastroenterology, two weeks, starting June 27. Gastroscopy, two weeks, starting June 13, July 18.

Electrocardiography and Heart Disease, two weeks, starting July 18.

**PEDIATRICS**—Diagnosis and Treatment of Congenital Malformations of the Heart, two weeks, starting June 13.

Personal Course in Cerebral Palsy, two weeks, starting August 1.

**DERMATOLOGY**—Formal Course, two weeks, starting June 13. Informal Clinical Course every two weeks.

**UROLOGY**—Intensive Course, two weeks, starting September 26.

Ten Day Practical Course in Cystoscopy every two weeks.

GENERAL, INTENSIVE AND SPECIAL COURSES IN ALL BRANCHES OF MEDICINE, SURGERY AND THE SPECIALTIES.

Teaching Faculty—Attending Staff, Cook County Hospital Registrar, 427 South Honore St., Chicago 12, Ill.

Hair Permanently Removed by Electrolysis

**DOROTHY WORRELL, R.N.**

233 Vandeventer, St. Louis

Telephone, Jefferson 9436

Work Done on Prescription of Physicians Only

## INDEX TO ADVERTISERS

Abbott Laboratories .....	426
Ames Company, Inc. ....	392
Ar-Ex Cosmetics, Inc. ....	404
Arlington Chemical Co. ....	455
Ayerst, McKenna & Harrison, Ltd. ....	437
Bilhuber-Knoll Corp. ....	398
Borden Company .....	453
Camel Cigarettes .....	425
Camp, S. H., & Co. ....	442
City View Sanitarium .....	455
Coleman & Bell Co. ....	450
Cook County Graduate School of Medicine .....	458
Cosmo-Cautery Co. ....	447
Duncan Laboratories .....	459
Faith Hospital .....	454
Glenwood Sanatorium .....	457
Gradwohl Laboratories .....	457
Hamilton-Schmidt .....	404
Hanger, J. E., Inc. ....	457
Isle, W. E., Co. ....	454
Lederle Labs. ....	441
Lilly, Eli, & Co. ....	Insert
Major Clinic .....	393
Massachusetts Indemnity Insurance Co. ....	450
Mead Johnson & Co. ....	460
Medical Protective Co. ....	404
Milwaukee Sanitarium .....	447
Mosby, C. V., Company .....	432
Mullen Ambulance .....	454
National Pathological Labs. ....	456
Norbury Sanatorium .....	454
North Shore Health Resort .....	456
Parke, Davis & Co. ....	390, 391
Phillip Morris & Co. ....	400, 401
Physicians Casualty Assn. ....	456
Pogue, Mary E., School .....	455
Producers Creamery Co. ....	449
Quincy X-Ray & Radium Labs. ....	404
Ralph Sanitarium .....	402
Robinson Clinic, Inc. ....	454
Schering Corporation .....	429
Schmid, Julius, Inc. ....	451
Searle, G. D., & Co. ....	423
Smith, Kline & French Labs. ....	445
Squibb, E. R., & Sons .....	395
Stokes Sanitarium .....	458
Swift & Company .....	439
Upjohn Company .....	431
U. S. Brewers Foundation, Inc. ....	449
U. S. Savings Bond .....	452
Wallace Sanitarium .....	398
Wander Company .....	403
Winthrop-Stearns, Inc. ....	397
Worrell, Dorothy .....	458
Wyeth, Inc. ....	399



*Your* **LABORATORIES**  
*Our* **RESPONSIBILITY**

CLINICAL PATHOLOGY  
PATHOLOGIC ANATOMY

**DUNCAN LABORATORIES**

*Established 1924*

909 Argyle Bldg. **KANSAS CITY 6, MO.**  
230 Frisco Bldg. **JOPLIN, MISSOURI**

RALPH EMERSON DUNCAN, M.D.

MAURICE L. JONES, M.D.

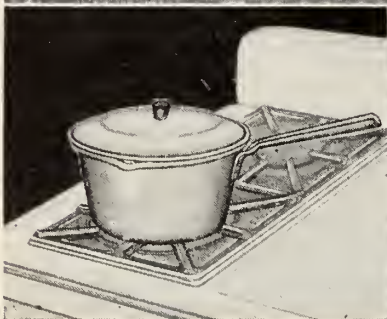
In addition to diagnostic laboratory services, chemically accurate and clinically tested reagents, solutions, stains and culture media are available for immediate delivery.

# DEXTRI-MALTOSE

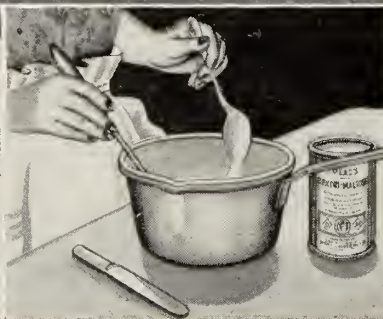
*Simple to use...*

## WITH EVAPORATED MILK

**1** Boil water.



**2** Stir in Dextri-Maltose while water is hot.



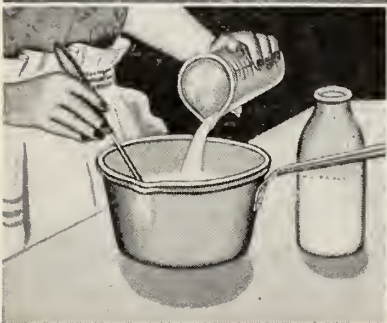
**3** Add evaporated milk and stir.



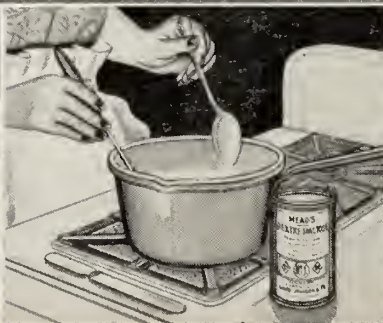
OR

## WITH WHOLE MILK

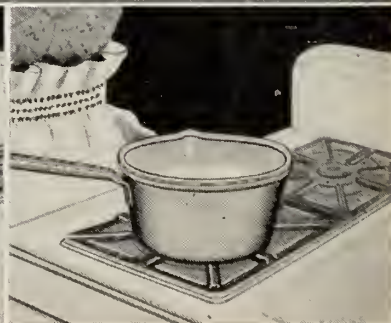
**1** Mix whole milk and water.



**2** Heat until almost boiling and stir in Dextri-Maltose.



**3** Boil gently for three minutes.



... FOR 38 YEARS COW'S MILK-DEXTRI-MALTOSE FORMULAS HAVE BEEN EMPLOYED BY PHYSICIANS TO MEET THE VARYING NUTRITIONAL REQUIREMENTS OF SICK AND WELL INFANTS. MEAD JOHNSON & CO., EVANSVILLE 21, IND., U. S. A.



190

THE  
**JOURNAL**  
*of the*  
**MISSOURI STATE MEDICAL ASSOCIATION**

★ JUL 4  
MEDICAL LIBRARY

VOLUME 46  
NUMBER 7

**JULY, 1949**

SINGLE COPY, 40 CENTS  
PER YEAR, \$3.00

**ORIGINAL ARTICLES**

**The Laboratory Diagnosis of Amebiasis**

**Endometrioma of the Umbilicus**

**Transurethral Prostatectomy**

**Five Year Results of Cancer Treatment at the  
Ellis Fischel State Cancer Hospital**

**A Method of Using the Chest Strap for Precordial Leads**



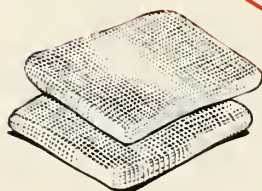
**EDITORIALS**

**Atlantic City Meeting**

**National Commission on Chronic Illness Formed**

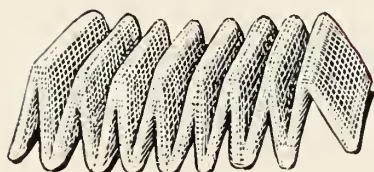
*(Contents Index Page 465)*

# a *refinement*



## *hemostatic*

Promptly and effectively controls bleeding;



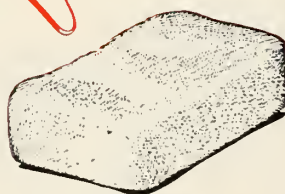
## *absorbable*

Completely absorbed from various types of tissue;



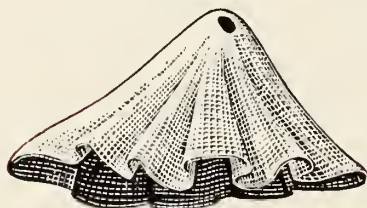
## *convenient*

Requires no cumbersome preparatory procedures;  
applied directly to bleeding surfaces as it comes  
from the container;



## *practical*

Pliable; easy to apply, conforms readily  
to wound surfaces;



## *versatile*

Available in forms adaptable to a maximum of uses.

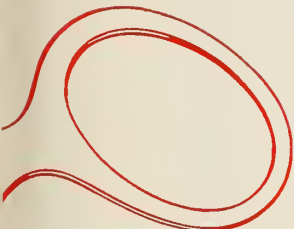
PARKE, DAVIS & COMPANY



# n surgical technic

# OXYCEL®

## *hemostasis*



In general surgery and in the specialized branches of surgery OXYCEL (oxidized cellulose, Parke, Davis & Company) aids the operator by stopping bleeding not readily controllable by clamp or ligature. This refinement in surgical technic is made possible by the distinctive features of OXYCEL.

#### PACKAGE INFORMATION

OXYCEL is supplied in individual screw-capped bottles.

**OXYCEL PADS (Gauze Type)** Sterile 3" x 3" eight-ply pads.

**OXYCEL STRIPS (Gauze Type)** Sterile 18" x 2" four-ply strips, pleated in accordion fashion.

**OXYCEL PLEDGETS (Cotton Type)** Sterile 2¼" x 1" x 1" portions.

**OXYCEL FOLEY CONES** Sterile four-ply gauze-type discs of 5" or 7" diameter folded in radially fluted form, used in prostatectomy.

DETROIT 32, MICHIGAN

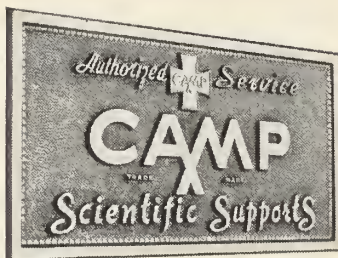



**CAMP**  
TRADE MARK

## SCIENTIFIC PRENATAL SUPPORTS

Designs developed over many years, in full consultation with obstetricians, insure ample support for the abdominal musculature, pelvic girdle and lumbar spine without constriction at any point. All Camp Supports are accurately fitted about the pelvis. Thus the uterus is maintained in better position, the abdominal muscles and fasciae are conserved and there is support for the relaxed pelvic joints. The patient is assisted in maintaining better balance in the course of the postural changes of pregnancy. Physicians may rely on the Camp-trained fitter for precise execution of all instructions.

If you do not have a copy of the Camp "Reference Book for Physicians and Surgeons", it will be sent on request.



THIS EMBLEM is displayed only by reliable merchants in your community. Camp Scientific Supports are never sold by door-to-door canvassers. Prices are based on intrinsic value. Regular technical and ethical training of Camp fitters insures precise and conscientious attention to your recommendations.

**S. H. CAMP & COMPANY, JACKSON, MICHIGAN**

*World's Largest Manufacturers of Scientific Supports*

Offices in New York • Chicago • Windsor, Ontario • London, England



## CONTENTS

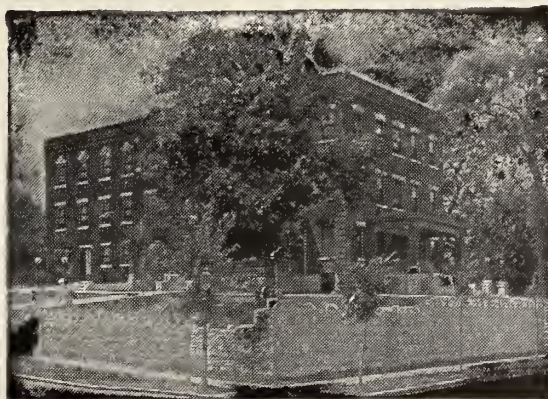
The Laboratory Diagnosis of Amebiasis. William C. Macdonald, M.D., St. Louis.....	477	Editorials—	
Endometrioma of the Umbilicus. O. J. Printz, M.D., Joseph H. Printz, M.D., and Sidney Rubin, M.D., Kansas City .....	479	Atlantic City Meeting .....	490
Transurethral Prostatectomy. J. Byron Beare, M.D., and Carl A. Wattenberg, M.D., St. Louis.....	482	National Commission on Chronic Illness Formed	490
Five Year Results of Cancer Treatment at the Ellis Fischel State Cancer Hospital. John Modlin, Columbia, Mo. ....	485	News Notes .....	491
A Method of Using the Chest Strap for Precordial Leads. Thomas S. Fleming, M.D., Moberly, Mo. ...	488	Musings of the Field Secretary.....	491
President's Page .....	489	Deaths .....	492
		Society Proceedings .....	492
		Miscellany .....	494
		Organization Activities .....	496
		Book Reviews .....	547
		Commercial Announcements .....	554

Entered as Second-Class Matter, February 18, 1925, at the Post Office at Fulton, Mo., under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1003, Act of October 3, 1917, authorized July 30, 1918. Business Office, 1201-5 Bluff St., Fulton, Mo., and 623 Missouri Building, St. Louis, Mo., Editorial Office, 623 Missouri Building, St. Louis, Mo. Return postage guaranteed. Printed by The Ovid Bell Press, Inc., Fulton, Mo.

# THE MAJOR CLINIC ASSOCIATION

3100 Euclid Avenue, Kansas City, Missouri

A Well  
Equipped  
Institution  
for the  
Treatment of  
Nervous and  
Mental  
Diseases and  
Alcohol  
Drug and  
Tobacco  
Addictions



Beautiful  
Location  
Large, Well  
Shaded  
Grounds,  
Spacious  
Porches,  
All Modern  
Methods for  
Restoring  
Patients to a  
Normal  
Condition

HERMON S. MAJOR, M.D.  
Medical Director

HERMON S. MAJOR, JR.  
Business Manager

**AMERICAN MEDICAL ASSOCIATION**

President, Roscoe L. Sensenich, South Bend, Ind.  
President-Elect, Ernest Edward Irons, Chicago.

Annual Session, Atlantic City, June 6-10, 1949

**MISSOURI STATE MEDICAL ASSOCIATION**

92nd Annual Session, St. Louis, March 26-29, 1950

President, Wallis Smith, Springfield.  
President-Elect, W. A. Bloom, Fayette.  
Vice Presidents, J. C. Creech, Troy; E. J. McIntire, Carthage;  
H. M. Henrickson, Poplar Bluff.  
Speaker, F. T. H'Doubler, Springfield; Vice Speaker, Victor E. Scherman, St. Louis.  
Treasurer, C. E. Hyndman, St. Louis.  
Secretary, H. E. Petersen, St. Joseph.  
Editor, R. O. Muether, St. Louis.  
Secretary-Editor Emeritus, R. L. Thompson, St. Louis.  
Field Secretary, Raymond McIntyre, St. Louis.  
Assistant Editor-Business Manager, Helen Penn, St. Louis.  
Executive Secretary, Tom R. O'Brien, 623 Missouri Bldg., St. Louis.

**Delegates to the American Medical Association**

R. E. Schlueter, St. Louis, 1949-51; alternate, F. G. Pernoud, St. Louis. James R. McVay, Kansas City, 1949-1951; alternate, R. B. Wray, Nevada. W. L. Allee, Eldon, 1948-50; alternate, Paul Baldwin, Kennett. Howard B. Goodrich, Hannibal, 1948-1950.

**Standing Committees**

**Scientific Work**—A. N. Arneson, St. Louis, Chairman (1951); Victor B. Buhler, Kansas City (1952); H. E. Petersen, St. Joseph.

**Postgraduate Course**—M. Pinson Neal, Columbia, Chairman (1952); Carl R. Ferris, Kansas City (1952); Raymond O. Muether, St. Louis (1951); Edward Massie, St. Louis (1951); Guy D. Callaway, Springfield (1950). **Associate Members**—W. W. Tillman, Bolivar; Kenneth Glover, Mount Vernon; Paul O. Hagemann, St. Louis; D. L. Sexton, St. Louis.

**Publication**—R. O. Muether, St. Louis, Chairman; V. T. Williams, Kansas City; H. E. Petersen, St. Joseph; M. D. Overholser, Columbia; Paul O. Hagemann, St. Louis.

**Public Policy and Public Relations**—Armand D. Fries, St. Louis, Chairman (1952); J. W. Allee, Columbia (1950); F. R. Crouch, Farmington (1951); Howard B. Goodrich, Hannibal (1951); John Growdon, Kansas City (1950). **Associate Member**—Cyril W. Schumacher, St. Louis.

**Defense**—Charles E. Hyndman, St. Louis, Chairman (1951); Roland S. Kieffer, St. Louis (1950); L. F. Heimbarger, Springfield (1950); O. B. Zeinert, St. Louis (1952); L. P. Forgrave (1952).

**Medical Education and Hospitals**—John S. Knight, Kansas City, Chairman (1951); F. T. H'Doubler, Springfield (1950); O. J. Gibson, Cape Girardeau (1952); D. M. Dowell, Chillicothe (1950); Oliver Abel, St. Louis (1952).

**Cancer**—E. C. Ernst, St. Louis, Chairman (1950); E. Kip Robinson, Kansas City (1951); Everett Sugarbaker, Jefferson City (1951); William E. Leighton, St. Louis (1952); Marvin Napper, Springfield (1952).

**Medical Economics**—Carl F. Vohs, St. Louis, Chairman (1950); Morris S. Harless, Kansas City (1951); C. T. Herbert, Cape Girardeau (1951); G. A. Aiken, Marshall (1952); A. P. Rowlette, Moberly (1952).

**Mental Health**—E. F. Hoctor, Farmington, Chairman (1951); Paul Hines, St. Louis (1950); Orr Mullinax, Jefferson City (1950); B. Landis Elliott, Kansas City (1952); Frank M. Grogan, St. Louis (1952).

**Maternal Welfare**—E. Lee Dorsett, St. Louis, Chairman (1952); Leo Hartnett, St. Louis (1952); J. L. Johnston, Springfield (1951); E. E. Wadlow, St. Joseph (1950); J. Milton Singleton, Kansas City (1950).

**Infant Care**—G. V. Herrman, Kansas City, Chairman (1951); Eugene Schwartz, Springfield (1951); H. E. Petersen, St. Joseph (1950); Peter G. Danis, St. Louis (1952); Park J. White, St. Louis (1952). **Associate Members**—Joseph C. Jaudon, St. Louis; Daniel B. Landau, Hannibal.

**Health and Public Instruction (McAlester Foundation)**—A. W. McAlester, III, Kansas City, Chairman (1950); M. K. Underwood, Rolla (1951); B. E. DeTar, Joplin (1951); Joseph Conrad, Chillicothe (1950); J. Earl Smith, St. Louis (1952).

**Constitution and By-Laws**—B. Landis Elliott, Kansas City, Chairman (1950); J. H. Summers, Lebanon (1951); John J. Hammond, St. Louis (1950); W. Logan Allee, Eldon (1952); H. O. Loyd, Jefferson City (1952).

Year indicates expiration of term.

**Fractures**—Daniel L. Yancey, Springfield, Chairman (1952); W. J. Stewart, Columbia (1951); N. S. Pickard, Kansas City (1951); W. R. Bohne, St. Louis (1950); J. Albert Key, St. Louis (1950). **Associate Members**—Jacob Kulowski, St. Joseph; B. L. Murphy, Hannibal.

**Conservation of Eyesight**—C. Souter Smith, Springfield, Chairman (1952); Robert Mattis, St. Louis (1951); A. N. LeMoine, Kansas City (1950); C. P. Dyer, St. Louis (1950); Robert S. Minton, St. Joseph (1952). **Associate Members**—Winfred L. Post, Joplin; Philip Luedde, St. Louis; John McLeod, Kansas City; G. J. Tygett, Cape Girardeau; S. L. Freeman, Kirksville; H. B. Stauffer, Jefferson City; E. D. Tenaglia, St. Louis.

**Control of Venereal Disease**—A. W. Neilson, St. Louis, Chairman (1952); W. S. Sewell, Springfield (1951); Charles Greenberg, St. Joseph (1950); Hugh L. Dwyer, Kansas City (1950); E. M. Cannon, St. Louis (1952).

**Industrial Health**—V. T. Williams, Kansas City, Chairman (1951); Horace F. Flanders, Kansas City (1951); E. M. Fessenden, St. Louis (1950); A. M. Ziegler, Kansas City (1952); R. A. Sutter, St. Louis (1952). **Associate Members**—R. Emmet Kelly, St. Louis; H. M. Roebber, Bonne Terre.

**Special Committees**

**Physical Medicine**—F. Garrett Pipkin, Kansas City, Chairman (1951); Emmett Settle, Rock Port (1950); Luke A. Knese, St. Louis (1950); A. J. Kotkis, St. Louis (1952); J. L. Washburn, Versailles (1952).

**Tuberculosis**—E. E. Glenn, Springfield, Chairman; Lawrence E. Wood, Kansas City; J. L. Mudd, St. Louis; Paul Murphy, St. Louis; C. A. Brashear, Mount Vernon; W. P. McDonald, St. Joseph; I. J. Flance, St. Louis; Florence E. MacInnis, Kansas City.

**Study of Cardiac Diseases**—A. Graham Asher, Kansas City, Chairman (1952); Drew Luten, St. Louis (1951); A. M. Estes, Jackson (1951); Julius Jensen, St. Louis (1950); Glenn W. Hendren, Liberty (1952). **Associate Members**—Horace W. Carle, St. Joseph; J. W. Fleming, Moberly; C. B. Davis, Nevada; Arthur Strauss, St. Louis; William I. Park, Springfield.

**Rural Medical Service**—R. W. Kennedy, Marshall, Chairman; A. E. Spelman, Smithville; J. W. Well, Palmyra; Martin M. Hart, Salem; R. B. Wray, Nevada.

**COUNCILOR DISTRICTS AND COUNTIES IN EACH DISTRICT\***

J. W. THOMPSON, St. Louis, Chairman

E. C. BOHRER, West Plains, Vice Chairman

**First District:** Councilor, Donald M. Dowell, Chillicothe. Counties: Andrew, Atchison, Buchanan, Caldwell, Carroll, Clay, Clinton, Daviess, De Kalb, Gentry, Grundy, Harrison, Holt, Livingston, Mercer, Nodaway, Platte, Ray, Worth.

**Second District:** Councilor, W. F. Francka, Hannibal. Counties: Adair, Chariton, Clark, Knox, Lewis, Linn, Macon, Marion, Monroe, Pike, Putnam, Ralls, Randolph, Schuyler, Scotland, Shelby, Sullivan.

**Third District:** Councilor, J. William Thompson, St. Louis; St. Louis City.

**Fourth District:** Councilor, Otto W. Koch, Clayton. Counties: Franklin, Jefferson, Lincoln, St. Charles, St. Louis County, Warren.

**Fifth District:** Councilor, J. F. Jolley, Mexico. Counties: Audrain, Boone, Callaway, Camden, Cole, Cooper, Gasconade, Howard, Maries, Miller, Moniteau, Montgomery, Morgan, Osage.

**Sixth District:** Councilor, R. W. Kennedy, Marshall. Counties: Bates, Benton, Cass, Cedar, Henry, Johnson, Lafayette, Pettis, St. Clair, Saline, Vernon.

**Seventh District:** Councilor, Edgar C. Virden, Kansas City. County: Jackson.

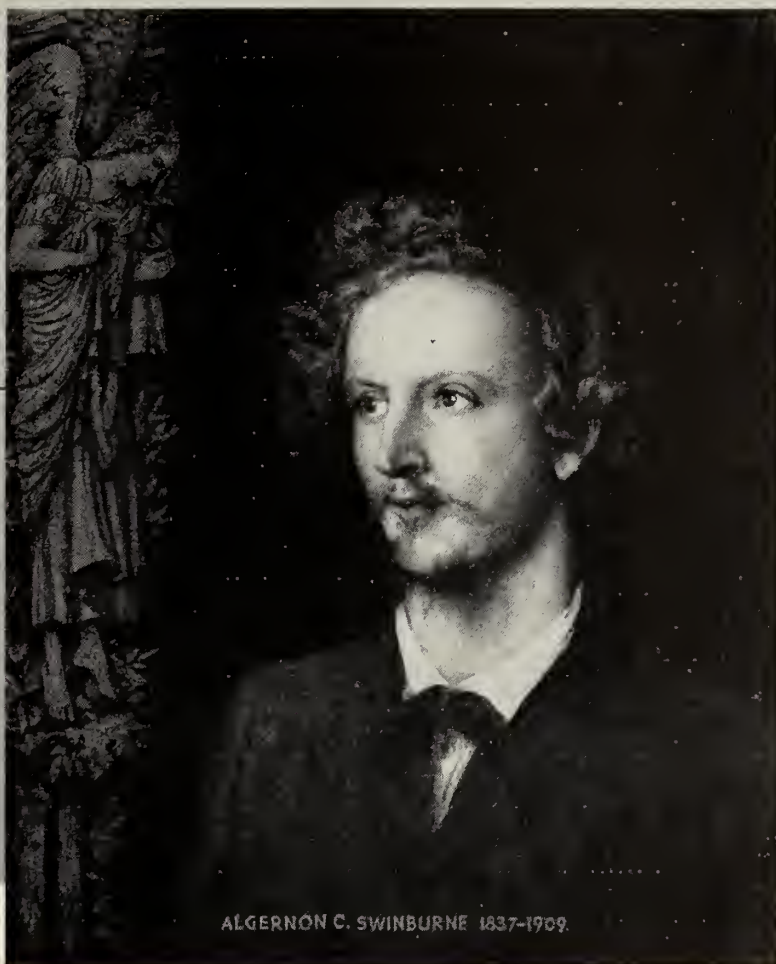
**Eighth District:** Councilor, W. S. Sewell, Springfield. Counties: Barry, Barton, Christian, Dade, Dallas, Greene, Hickory, Jasper, Lawrence, McDonald, Newton, Polk, Stone, Taney, Webster.

**Ninth District:** Councilor, E. Claude Bohrer, West Plains. Counties: Carter, Crawford, Dent, Douglas, Howell, Laclede, Oregon, Ozark, Phelps, Pulaski, Ripley, Shannon, Texas, Wright.

**Tenth District:** Councilor, Frank W. Hall, Cape Girardeau. Counties: Bollinger, Butler, Cape Girardeau, Dunklin, Iron, Madison, Mississippi, New Madrid, Pemiscott, Perry, Reynolds, St. Francois, Ste. Genevieve, Scott, Stoddard, Washington, Wayne.

Counties in italics are not organized.





★ *Epileptic Men of Genius* ★

The famous English poet, Algernon Charles Swinburne, who began to show signs of epilepsy at the age of 25, is a prominent example that despite epilepsy a man may develop to true greatness.

Comparative studies have shown that in some cases better control of grand mal as well as petit mal seizures can be obtained with Mebaral than with corresponding doses of other antiepileptic drugs. Mebaral produces tranquillity with little or no drowsiness. It is particularly desirable not only in epilepsy but also in the management of anxiety states and other neuroses. The fact that Mebaral is almost tasteless simplifies its administration to children. Average dose for children  $\frac{1}{2}$  to 3 grains, adults 3 to 6 grains daily. Tablets  $\frac{1}{2}$ ,  $1\frac{1}{2}$  and 3 grains.

**MEBARAL<sup>®</sup>**  
Brand of Mephobarbital

*Winthrop-Stearns* INC. • NEW YORK 13, N. Y. WINDSOR, ONT.

Mebaral, trademark reg. U. S. & Canada

# County Societies in Affiliation with the Missouri State Medical Association

COUNTY	DISTRICT	PRESIDENT	ADDRESS	SECRETARY	ADDRESS
Andrew	1	V. R. Wilson	Rosendale	M. L. Holliday	Fillmore
Audrain	5	Glen P. Kallenbach	Mexico	Fred Griffin	Mexico
Barton-Dade	8	Rudolf Knapp	Golden City	Vern T. Bickel	Lamar
Bates	6	C. J. Allen	Rich Hill	John M. Cooper	Butler
Benton	6	T. S. Reser	Cole Camp	James A. Logan	Warsaw
Boone	5	James Baker	Columbia	Helen Yeager	Columbia
Buchanan	1	O. Earl Whitsell	St. Joseph	Joseph L. Fisher	St. Joseph
Butler	10	Frank E. Dinelli	Poplar Bluff	J. W. McPheeters, Jr.	Poplar Bluff
Caldwell-Livingston	1	Virgil D. Vandiver	Chillicothe	Charles M. Grace	Chillicothe
Callaway	5	R. B. Price	Fulton	R. N. Crews	Fulton
Camden	5	E. G. Claiborne	Camdenton	G. T. Myers	Macks Creek
Cape Girardeau	10	O. J. Gibson	Cape Girardeau	Charles F. Wilson	Cape Girardeau
Carroll	1	J. Morris Atwood	Carrollton	John H. Platz	Carrollton
Carter-Shannon	9	Harry Rollins	Winona	W. T. Eudy	Eminence
Cass	6	Herbert A. Tracy	Belton	O. B. Barger	Harrisonville
Charlton-Macon-Monroe-Randolph	2	D. E. Eggleston	Macon	Henry K. Baker	Moberly
Clay	1	W. H. Goodson	Liberty	S. R. McCracken	Excelsior Springs
Clinton	1	Ronald E. Wilbur	Cameron	F. A. Santner	Lathrop
Cole	5	H. M. Wiley	Jefferson City	J. Paul Leslie	Jefferson City
Cooper	5			J. C. Tinch	Boonville
Dallas-Hickory-Polk	8	C. H. Barnett	Bolivar	John R. O'Brien	Bolivar
De Kalb	1			W. S. Gale	Osborn
Dunklin	10	Quinton Tarver	Kennett	E. L. Spence	Kennett
Franklin	4	Herbert H. Schmidt	Marthasville	F. G. Mays	Washington
Greene	8	Daniel L. Yancey	Springfield	Kenneth E. Knabb	Springfield
Grundy-Daviess	1	Joseph M. Quisito	Trenton	E. A. Duffy	Trenton
Harrison	1	Merriam Gearhart	Bethany	W. A. Broyles	Bethany
Henry	6	S. B. Hughes	Clinton	R. S. Hollingsworth	Clinton
Holt	1	F. E. Hogan	Mound City	D. C. Perry	Mound City
Howard	5	Morris Leech	Fayette	Francis D. Dean	Fayette
Jackson	7	A. N. Altringer	Kansas City	Kenneth E. Cox	Kansas City
Jasper	8	George H. Wood	Carthage	E. H. Hamilton	Joplin
Jefferson	4	Robert H. Donnell	Crystal City	George Hopson	DeSoto
Johnson	6	O. H. Damron	Warrensburg	Reed T. Maxson	Warrensburg
Laclede	9	H. W. Carrington	Lebanon	B. B. Hurst	Lebanon
Lafayette	6	Douglas Kelling	Waverly	Jordan Kelling	Waverly
Lewis-Clark-Scotland	2	J. R. Bridges	Kahoka	P. W. Jennings	Canton
Lincoln	4	H. S. Harris	Troy	J. C. Creech	Troy
Linn	2	Roy R. Haley	Brookfield	J. R. Dixon	Brookfield
Marion-Ralls	2	H. L. Greene	Hannibal	M. J. Roller	Hannibal
Mercer	1	T. S. Duff	Cainsville	J. M. Perry	Princeton
Miller	5			Carl T. Buehler, Jr.	Eldon
Mississippi	10	G. W. Whitaker	East Prairie	E. C. Rolwing	Charleston
Moniteau	5	K. S. Latham	California	L. L. Latham	California
Montgomery	5	E. J. T. Anderson	Montgomery City	S. J. Byland	Wellsville
Morgan	5	A. J. Gunn	Versailles	J. L. Washburn	Versailles
New Madrid	10	L. J. Smith	New Madrid	H. W. Carter	Portageville
Newton	8	H. C. Lentz	Neosho	J. A. Guthrie	Neosho
Nodaway-Atchison-Gentry-Worth	1	Frank H. Rose	Albany	Charles D. Humbert	Barnard
North Central Counties Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam)	2	Spencer L. Freeman	Kirksville	John B. Jones	Kirksville
Ozarks Medical Society (Barry-Lawrence-Stone-Christian-Taney)	8	Fred Wommack	Crane	Kenneth Glover	Mt. Vernon
Pemiscot	10	E. L. Taylor	Steele	C. F. Cain	Caruthersville
Perry	10	J. J. Bredall	Perryville	L. W. Feltz	Perryville
Pettis	6	E. L. Rhodes	Sedalia	Carl D. Siegel	Sedalia
Phelps-Crawford-Dent-Pulaski	9	A. A. Drake	Rolla	M. K. Underwood	Rolla
Pike	2	Eugene Barrymore	Bowling Green	Charles H. Lewellen	Louisiana
Platte	1	L. C. Calvert	Weston	E. K. Langford	Platte City
Ray	1	L. D. Greene	Richmond		
St. Charles	4	J. M. Jenkins	St. Charles	Calvin Clay	St. Charles
St. Francois-Iron-Madison-Washington-Reynolds	10	George L. Watkins	Farmington	Marvin T. Haw, Jr.	Bonne Terre
Ste. Genevieve	10	A. E. Sexauer	Ste. Genevieve	R. W. Lanning	Ste. Genevieve
St. Louis City	3	J. W. Thompson	St. Louis	S. J. Merenda	St. Louis
St. Louis	4	Paul R. Whitener	St. Louis	Robert C. Kingsland	St. Louis
Saline	6	James A. Reid	Marshall	Charles A. Veatch	Marshall
Scott	10	W. C. Critchlow	Sikeston	W. J. Ferguson	Sikeston
Shelby	2	D. L. Harlan	Clarence		
South Central Counties Medical Societies (Howell-Oregon-Texas-Wright-Douglas)	9	Garrett S. Hogg, Jr.	Cabool	A. C. Ames	Mountain Grove
Stoddard	10	H. A. Harris	Bloomfield	W. C. Dieckman	Dexter
Vernon-Cedar	6	William H. Allen	Nevada	Rolla B. Wray	Nevada
Webster	8	C. R. Macdonnell	Marshfield	E. G. Beers	Seymour



# How mild can a cigarette be?

## DOCTORS REPORT

In a recent test of hundreds of people who smoked only Camels for 30 days, noted throat specialists, making weekly examinations, reported

**"NOT ONE SINGLE CASE OF THROAT IRRITATION DUE TO SMOKING CAMELS!"**



## SMOKERS REPORT

**"I MADE MY OWN PERSONAL 30-DAY TEST! NOW I KNOW—CAMELS ARE THE MILDEST, BEST-TASTING CIGARETTE I EVER SMOKED!"**

*Sylvia MacNeill*

SECRETARY



R. J. Reynolds Tobacco Company, Winston-Salem, N. C.

According to a Nationwide survey:

*More Doctors smoke Camels*  
**than any other cigarette**

Doctors smoke for pleasure, too! And when three leading independent research organizations asked 113,597 doctors what cigarette they smoked, the brand named most was Camel





## THE LUZIER FACIAL SERVICE

This service includes a comprehensive range of types, variations and shades of preparations for dry, normal and oily conditions of skin. A balanced service includes preparations for cleansing, conditioning and makeup. Dry skins need lubricating creams and emollient lotions. Oily skins need astringents and suitable makeup bases. Normal skins deserve the protection afforded by suitable creams and lotions. We believe that artistically applied makeup improves the appearance of any type of skin. Loveliness thrives on intelligent care.

### Luzier's Fine Cosmetics and Perfumes Are Distributed in Missouri by:

#### Chilcutt and Chilcutt, Divisional Distributors

Box 774, Jefferson City, Missouri

##### DISTRIBUTORS

Pearl Jackson  
510 Woodlawn  
Mexico, Mo.

Elva Gones  
305½ W. 4th  
Hannibal, Mo.

Ellou Hurst  
Box 194  
St. Charles, Mo.

Bonnie Fox  
722 S. Jefferson  
Springfield, Mo.

Verna Bell Prophet  
338 Landers Bldg.  
Springfield, Mo.

Mildred Davis  
326 S. East Drive  
Macon, Mo.

#### Glenna Sanders, Divisional Distributor

4944 Murdock St.

Phone Plateau 4442

St. Louis, Mo.

#### Alpha Eade, Divisional Distributor

705 Olive Street, Room 511

Phone GA 5347

St. Louis 1, Missouri

##### DISTRIBUTORS

Mrs. Anna L. Brown  
2317 Indiana Ave.  
St. Louis 4, Mo.  
Phone GR 2918

Mrs. Viola M. Dilg  
426 Northridge  
St. Louis 15, Mo.  
Phone CO 7919

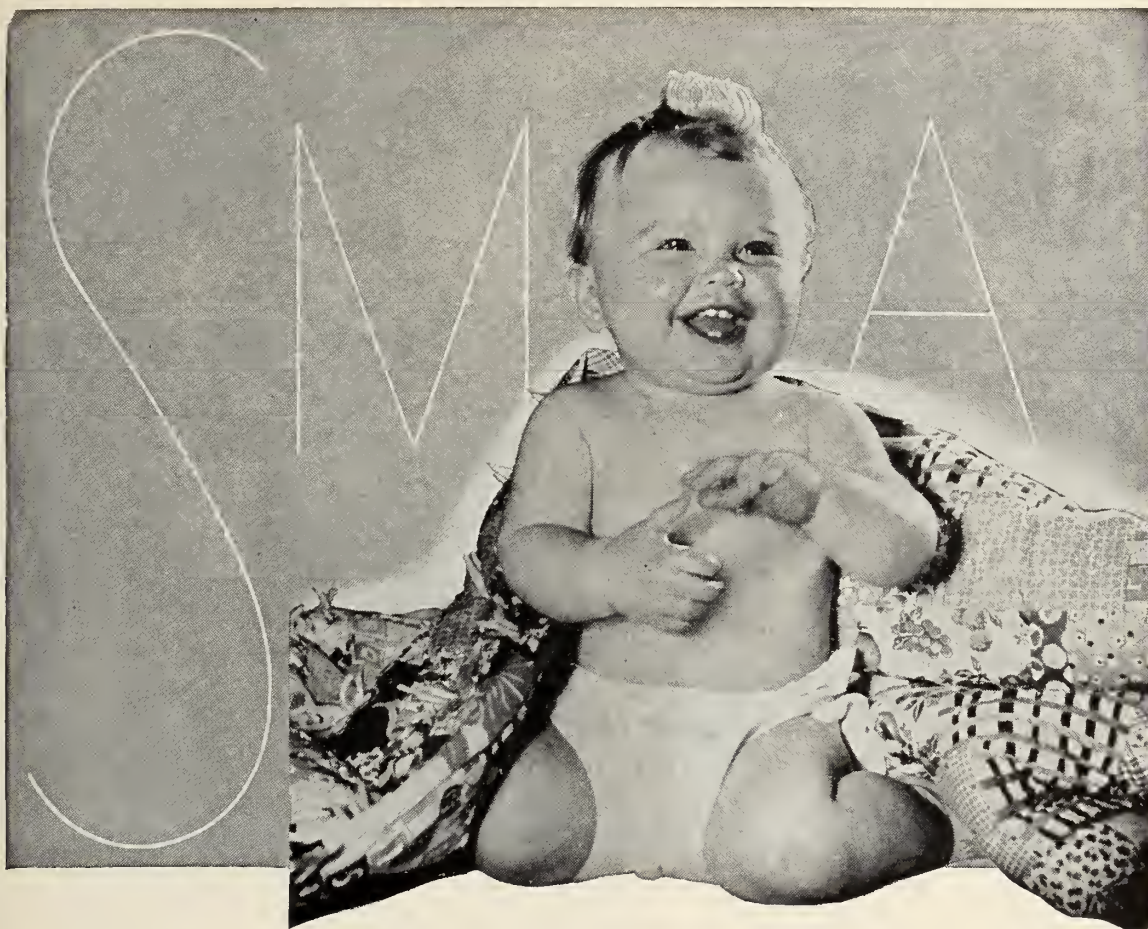
Laura B. Roberson  
3412 Humphrey  
St. Louis 18, Mo.  
Phone LA 1833

Mrs. Betty H. Crain  
5367 Gladstone  
Normandy 21, Mo.  
Phone GO 6714

Rose Miller  
1121 Fullerton Bldg.  
122 N. 7th St.  
St. Louis 1, Mo.  
Phone GA 5335

Mrs. Myrle C. Treanor  
5974 Julian  
St. Louis 12, Mo.  
Phone DE 8067





## ESSENTIALLY THE SAME AS HUMAN MILK IN ALL VITAL NUTRIENTS

In S-M-A the **amino acid** content—the growth-promoting factors, methionine and tryptophane included—is as high as the peak values for these amino acids in human milk . . .

**vitamin** content (including **vitamin C**) equals or exceeds minimum daily requirements . . .

**minerals** compare favorably with those of human milk . . .

**fat**—the iodine number (index of **unsaturated fatty acids**) for S-M-A fat is standardized at the top of the range found in human milk.

The percentage of linoleic acid (14.4) and linolenic acid (0.4) in the total S-M-A fat compares well with the same values for human milk.

## S-M-A builds husky babies



WYETH INCORPORATED, PHILA. 3, PA.



*Your* **LABORATORIES**  
*Our* **RESPONSIBILITY**

CLINICAL PATHOLOGY  
PATHOLOGIC ANATOMY

**DUNCAN LABORATORIES**

*Established 1921*

909 Argyle Bldg. **KANSAS CITY 6, MO.**  
230 Frisco Bldg. **JOPLIN, MISSOURI**

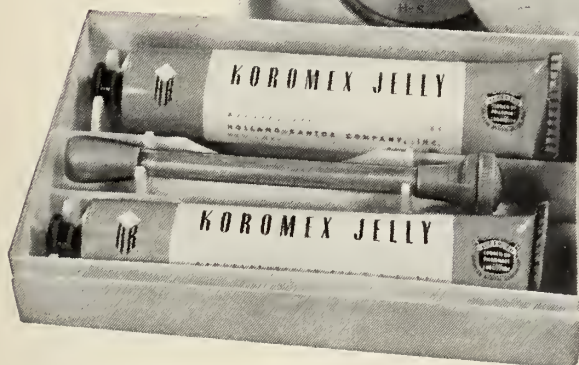
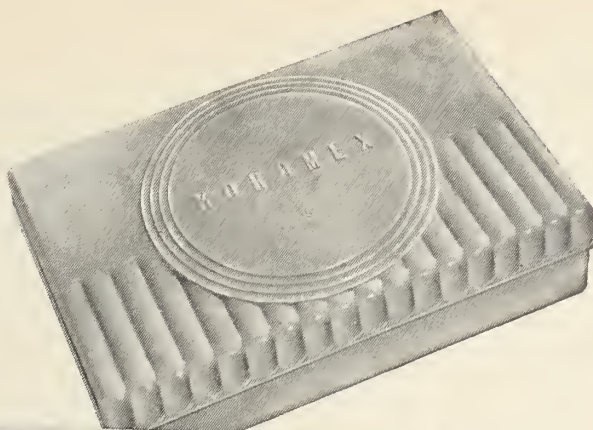
RALPH EMERSON DUNCAN, M.D.

MAURICE L. JONES, M.D.

In addition to diagnostic laboratory services, chemically accurate and clinically tested reagents, solutions, stains and culture media are available for immediate delivery.



INTRODUCING...

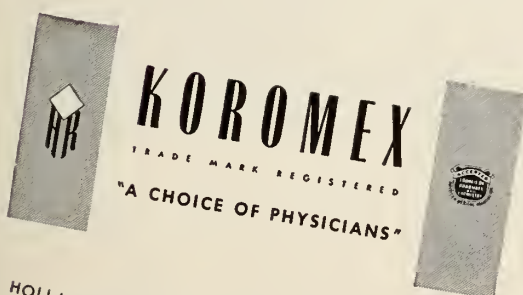


## THE KOROMEX JELLY REFILLABLE UNIT

Physicians acclaim the new Koromex all inclusive contraceptive unit. This fine container is ivory-colored plastic, permanent, dust-proof, attractive for home use and ideal for traveling. It contains two regular size tubes of Koromex Jelly which rest in individual compartments... a Koromex Diaphragm stored in the ingeniously constructed cover compartment... and a Koromex Measured Dose Plunger Applicator that rests securely on its own rack.

Where pregnancy is contra-indicated, recommend the complete Koromex Jelly Refillable Unit to your discriminating women patients. For those of your patients who require a slightly less lubricating but equally effective spermicidal preparation, a similar companion package containing two tubes of Koromex Cream instead of Koromex Jelly is also available.

ACTIVE INGREDIENTS: BORIC ACID 2.0% OXYQUINOLIN BENZOATE 0.02% AND PHENYLMERCURIC ACETATE 0.02%, IN SUITABLE JELLY OR CREAM BASES.



HOLLAND-RANTOS COMPANY, INC., 145 HUDSON STREET, NEW YORK 13, N. Y.  
MERLE L. YOUNGS • PRESIDENT

## ACCIDENT • HOSPITAL • SICKNESS

**INSURANCE**

For Physicians, Surgeons, Dentists Exclusively



<b>\$5,000.00 accidental death</b>	<b>\$ 8.00</b>
\$25.00 weekly indemnity, accident and sickness quarterly	
<b>\$10,000.00 accidental death</b>	<b>\$16.00</b>
\$50.00 weekly indemnity, accident and sickness quarterly	
<b>\$15,000.00 accidental death</b>	<b>\$24.00</b>
\$75.00 weekly indemnity, accident and sickness quarterly	
<b>\$20,000.00 accidental death</b>	<b>\$32.00</b>
\$100.00 weekly indemnity, accident and sickness quarterly	

Also Hospital Expense for Members  
Wives and Children

85c out of each \$1.00 gross income used for members' benefit

<b>INVESTED ASSETS</b>	<b>PAID FOR CLAIMS</b>
<b>\$3,700,000.00</b>	<b>\$15,700,000.00</b>

\$200,000.00 deposited with State of Nebraska for protection of our members.

Disability need not be incurred in line of duty—benefits from the beginning day of disability

**PHYSICIANS CASUALTY ASSOCIATION**  
**PHYSICIANS HEALTH ASSOCIATION**

47 years under the same management

400 First National Bank Building, OMAHA 2, NEBR.

## All worth while laboratory examinations; including—

Tissue Diagnosis

The Wassermann and Kahn Tests

Blood Chemistry

Bacteriology and Clinical Pathology

X-Ray including Gastro-Intestinal Study and Gall Bladder Visualization

Basal Metabolism

Pregnancy Test

Electrocardiograms with interpretation

## National Pathological Laboratory

RALPH L. THOMPSON, M.D., Director

601-616 University Club Bldg.

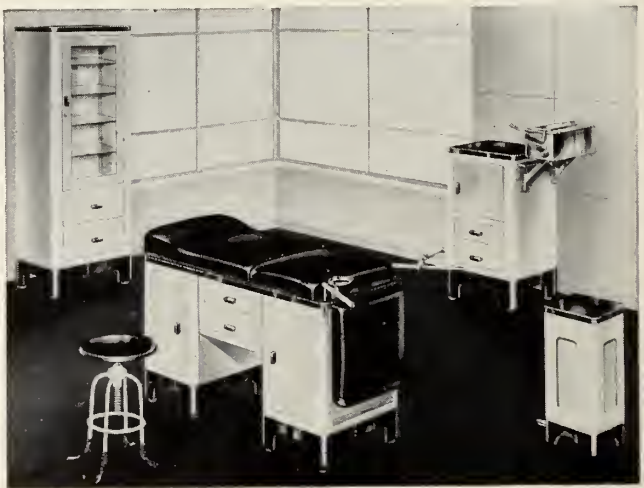
ST. LOUIS

Telephone JEFFERSON 6088



... sets the pace for  
beauty and utility in mod-  
ern treatment room furniture

A modern treatment room in attractive Steeline can now be yours at relatively low cost. After restricted production schedules during the war, Steeline is once again in full production and is offered in a choice of colors. Steeline was designed to modernize the appearance of physicians' offices and increase the functional utility of every unit. Although the beauty and attractiveness of Steeline strikes a predominantly modern note, its styling is in such perfect taste that it will never become outmoded. Steeline is constructed of out-body type steel and finished to last for years. Illustrated here is a typical group of Steeline treatment



room units. For complete construction details, information on colors available, prices and terms, just mail a card or letter to the address below.

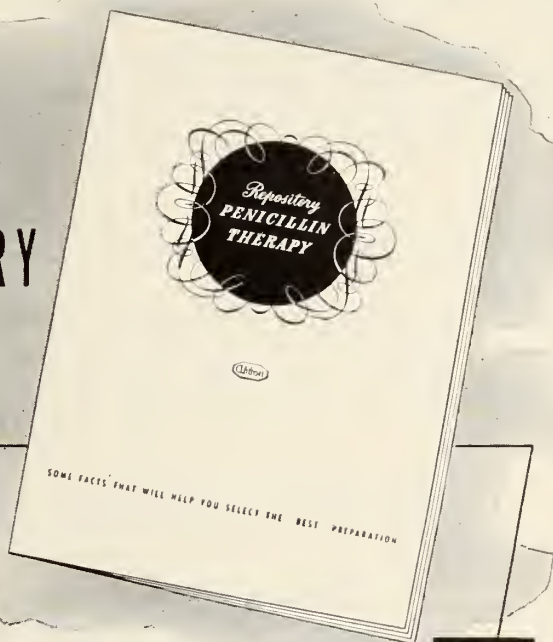
**A. S. ALOE COMPANY**

General Offices: 1831 Olive Street, St. Louis 3, Mo.





# Q. and A. OF REPOSITORY PENICILLIN



- Why should a busy practicing physician bother about understanding the factors that influence penicillin blood curves?
- Are blood levels after penicillin procaine in aqueous suspension similar to those after penicillin procaine in oil?
- How are repository penicillin preparations best used?
- Can penicillin G potassium in aqueous solution be used for repository therapy?
- Which kinds of infections will respond to low levels of penicillin?

Send for  
Your FREE  
Copy  
Today

These questions and many others are answered in "Repository Penicillin Therapy," a new 36-page book prepared by the Medical Staff of Abbott Laboratories to help clarify the penicillin picture. This book covers recent and significant work by leading investigators in the field of penicillin research and therapy. Numerous charts illustrate the text. The bibliography contains 67 references.

For your FREE COPY of this up-to-date, informative manual, simply fill out, clip and return the coupon below. Do it now before it slips your mind.

## ABBOTT

LABORATORIES

North Chicago, Illinois

**A Leader in  
Penicillin Development  
and Production**

Professional Service Department  
ABBOTT LABORATORIES  
North Chicago, Illinois

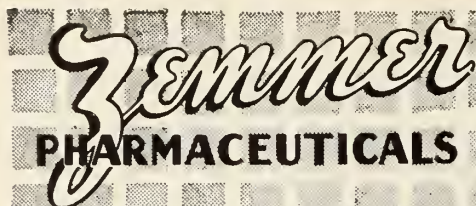
Please send me a FREE copy of your new book, "Repository Penicillin Therapy":

NAME .....M.D.

STREET .....

CITY, ZONE, STATE .....

STMJ 17-749



A complete line of laboratory  
controlled ethical pharmaceuticals.  
*Chemists to the Medical Profession for 44 years.*  
Mo. 7-49 *The Zemmer Company*  
Oakland Station • PITTSBURGH 13, PA.

**RADIUM** (including Radium Applicators) FOR ALL MEDICAL PURPOSES  
*Est. 1919*

**QUINCY X-RAY & RADIUM LABORATORIES**

(owned and directed by a Physician-Radiologist)

W. C. U. Bldg.

HAROLD SWANBERG, B.S., M.D., Director

QUINCY, ILLINOIS

**HAMILTON-SCHMIDT SURGICAL COMPANY**

*St. Louis, Missouri*

[[ Surgical Instruments, Invalid and Sick Room Supplies ]]  
[[ Post-Operative Belts, Elastic Hosiery and Trusses Fitted ]]

Central 1680

REGISTERED NURSE IN ATTENDANCE 215 North Tenth Street

*for Fifty Years*

**PROFESSIONAL PROTECTION  
EXCLUSIVELY**

**THE  
MEDICAL PROTECTIVE COMPANY  
FORT WAYNE, INDIANA**

ST. LOUIS Office: A. W. Breckenkamp, Representative, 623 Missouri Theatre Building, Telephone Newstead 0404



# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies  
Issued Monthly under direction of the Publication Committee

COPYRIGHTED, 1949, BY MISSOURI STATE MEDICAL ASSOCIATION. ALL RIGHTS RESERVED.

VOLUME 46

JULY, 1949

NUMBER 7

R. O. MUETHER, M.D., Editor  
HELEN PENN, Assistant Editor  
623 Missouri Bldg., St. Louis, Mo. Telephone, Newstead 0404-05

PUBLICATION COMMITTEE { R. O. MUETHER, M.D., Chairman  
V. T. WILLIAMS, M.D.  
H. E. PETERSEN, M.D.  
PAUL O. HAGEMANN, M.D.  
M. D. OVERHOLSER, M.D.

### THE LABORATORY DIAGNOSIS OF AMEBIASIS

WM. C. MACDONALD, M.D., *St. Louis*

EVER SINCE the discovery by Losch,<sup>1</sup> in 1875, of amebae in the feces and intestinal ulcerations of a Russian soldier suffering from dysentery, methods to facilitate the finding and recognition of the *Endamoeba histolytica* have been under active investigation.

There are, today, several satisfactory laboratory methods with which all clinicians should be familiar; unfortunately all are not. This is particularly unfortunate because the only certain means by which a diagnosis of *E. histolytica* infestation can be made is by recovering the organism from the stool. That is, of course, excluding the complement fixation reaction which, at the present time, is not to be considered a routine diagnostic method, particularly in the smaller laboratories, hospitals or in office practice.

Even with the improved laboratory methods many cases of amebiasis are unrecognized and, consequently, receive ineffective therapy. That this problem is of sufficient magnitude to warrant the attention of all clinicians may be realized by studying the figures on the incidence of the infection as compiled by various authors. In general, it may be said that the incidence in the United States varies from 5 to 12 per cent among the general population, and it is a well established fact that many cases are "symptomless" carriers; therefore, amebiasis must have a high position in the differential diagnosis of all individuals with enteric complaints and disorders.

*Recognition of the organism.*—Before proceeding with the laboratory methods employed it may be well to say a few words concerning the appearance of *E. histolytica* when recovered from the human

body. The two forms that usually are encountered are either the trophozoite or the cystic form.

The trophozoite is the actively motile form and is responsible for the clinical manifestations. It averages from 15 to 20 micra in diameter and when seen in the fresh specimen is actively motile. A definite distinction can be made between a clear ectoplasm and a finally granular endoplasm which does not contain debris or bacteria, but may contain red blood cells although this is not a constant feature. Locomotion is by means of pseudopodia which are thrust out quickly and into which the endoplasm flows. The characteristic features to remember are: the active motility, the distinction between a clear ectoplasm and finely granular endoplasm, the quick extension of pseudopodia and the absence of debris and bacteria in the endoplasm.

The cystic form, which, when fully matured, is the infective agent, varies from 6 to 20 micra in diameter. It is usually spherical, but may be slightly ovoidal, in shape. With the iodine stains that are commonly used it assumes a lemon yellowish color. The nuclei vary from one in the immature cyst to four in the fully mature cyst. Each nucleus contains a centrally placed karyosome. In some cysts chromatoidal bodies may be seen which are rod like or sausage shaped refractile bodies. In reiteration, the important features are: the presence of from one to four nuclei, the centrally placed karyosome and, when present, the rod like chromatoidal bodies.

*Methods of examination.*—The methods of examination that are most useful are: the microscopic examination of the stool, the protoscopic examination, the examination of the colonic contents, the stool culture and the complement fixation reaction.

*Microscopic examination of the stool.*—For a

<sup>1</sup>From the Department of Internal Medicine, St. Louis University School of Medicine.

direct smear a small portion of feces is removed with an applicator and placed on each end of a glass slide. These may be mixed with a drop or two of saline. One is covered with a cover slip and examined immediately for motile forms while to the other a drop or two of D'Antoni's iodine, Donaldson's iodine or fresh Lugol's solution is added and covered with a cover slip. This specimen is then examined for cystic forms. The direct smear may be stained by the iron-hematoxylin method, which will bring out either the trophozoites or the cysts, and such preparations may be examined at leisure. This method, which is time consuming, does not have a proportionately greater degree or positiveness. One negative stool examination should never be accepted as definite evidence in ruling out infection with *E. histolytica*. At least three or four such examinations should be made, and these preferably should be taken at three or four day intervals. As an addendum to this method, particularly if negative, each specimen should be concentrated as this will often reveal cysts when they were not observed in the direct smear. The method I prefer is the zinc sulfate centrifugal flotation technic:<sup>2</sup>

1. To a small portion (about 1 gm.) of fecal material ten parts of lukewarm tap water are added and a fecal suspension made.

2. This suspension is filtered through one layer of wet cheesecloth into a Wasserman tube.

3. The filtrate is centrifuged for from 40 to 60 seconds at from 2,500 to 3,000 rotations per minute. The supernatant fluid is discarded. From 2 to 3 cc. of tap water is added and the sediment resuspended. Additional water to fill the tube is added.

4. Procedure "3" is repeated until the supernatant fluid is clear; this usually requires from three to five washings.

5. The supernatant fluid is poured off; from 3 to 4 cc. of 33 per cent zinc sulfate solution having a specific gravity of 1.180 is added. The sediment is resuspended and the tube filled to within 1 centimeter of the top with additional 33 per cent zinc sulfate solution.

6. The tube is again centrifuged for from 45 to 60 seconds at from 2,500 to 3,000 rotations per minute.

7. Several loopfuls of material are removed with a bacteriological loop from the surface film, placed on a clean slide, stained with an iodine solution and examined microscopically.

I have found this concentration technic to be extremely useful as it is also efficacious in the search for helminth eggs and larvae as well as protozoan cysts.

*Proctoscopic examination.*—A proctoscopic examination should be performed in every suspected case. The bowel wall should be scrutinized carefully for the appearance of inflammation, granularity and ulceration. The lesions of amebiasis that may be recognized through the protoscope consist of either small pinhead irregular areas of inflam-

mation surrounded by hyperemia and edema, or small projecting nodular elevations with a small opening at the apex. When these are broken open, or incised, they are found to contain gelatinous material in which are actively motile trophozoites. When any lesions are encountered, material from them should be obtained, placed on a glass slide and examined microscopically at once.

In many cases the amebic lesions are not in the rectum or sigmoid so that this method, as all others, has its limitations. As well known, the majority of lesions occur in the cecal area and it may be necessary to resort to other procedures to demonstrate the parasite from such lesions. The methods most successful for this study are either saline purgation or, if this is contraindicated, saline enemata.

If saline purgation is to be used, sodium sulphate is recommended. The first liquid stool, after passage of the first formed stool, is examined immediately microscopically. If it seems inadvisable because of the condition of the patient to use this method, then saline enemata are recommended. One quart of saline should be given and expelled in order to cleanse the lower bowel. Another quart should then be given and the second portion expelled should be examined at once. This method has been found to be quite satisfactory in revealing motile forms that could not be obtained by any other means.

Culture of the stool for amebae has been used often and still is recommended by some investigators as a routine diagnostic procedure. Many media have been devised and each one has its advantages in the hands of a particular worker. To the inexperienced, however, there are so many pitfalls in the culture technic it is not to be recommended heartily.

The complement fixation reaction is a specific test but a potent antigen is difficult to obtain and is unstable. As mentioned before, this is not to be considered routine procedure.

#### CONCLUSION

Many cases of amebiasis are unrecognized and will remain undiagnosed for the want of proper laboratory diagnostic methods. The diagnostic methods recommended and described are the direct film, the concentration technic, the proctoscopic examination and the study of the colonic contents obtained either by saline purgation or saline enemata. At the present time the stool culture and complement fixation reaction entail too many technical difficulties to warrant their routine use in office practice or in the smaller laboratories.

539 N. Grand Blvd.

#### BIBLIOGRAPHY

1. Losch, Von F.: Massenhafte Entwicklung von Amöben im Dickdarm, Virchow's Arch. f. path. Anat. 65:196.
2. Faust, E. C., D'Antoni, J. S., et al.: A Critical Study of Clinical Laboratory Technics for the Diagnosis of Protozoan Cysts and Helminth Eggs in Feces, Am. J. Trop. Med. 18:169-183 (March) 1938.



## ENDOMETRIOMA OF THE UMBILICUS

O. J. PRINTZ, M.D., *Kansas City*JOSEPH H. PRINTZ, M.D., *Kansas City*

AND

SIDNEY RUBIN, M.D., *Kansas City*

A CASE OF endometrioma of the umbilicus and a review of the literature are presented and the findings correlated as presented in the previously reported cases.

## REVIEW OF LITERATURE

The endometrial nature of adenomyoma of the umbilicus was first suspected by Goddard<sup>1</sup> who, in 1909, reported two umbilical tumors of probable uterine origin. Cullen<sup>2</sup> confirmed Goddard's observations when he reported these tumors as containing uterine mucosa and devoted an entire chapter to a discussion of this pathologic entity. In addition, he collected a series of fifteen such cases. In 1932, Herman Spitz<sup>3</sup> was able to collect fifty-four cases of endometrioma of the umbilicus. To this he added his own case, thus making a total of fifty-five cases. In 1930, Herbert Chapman<sup>4</sup> reviewed the literature and added his single case bringing the cases reported to 101. Since his report, an excellent review, ten similar cases have been reported and, with the present case, a total of 112 cases are on record.

## DISCUSSION

Endometriosis of the umbilicus, although relatively rare, should be recognized easily if one is cognizant of the signs and symptoms. It is a condition appearing exclusively in women (if one is to exclude the highly debatable case of Koslowski<sup>5</sup>) and is predominant in white females, with a single case being reported in a Negro.<sup>6</sup> A review of the literature reveals that approximately 70 per cent of the cases start in the third decade of life. However, endometriosis may occur at either extreme of the menstruating age group. Enzer's<sup>7</sup> case, a girl 18 years old, is the youngest on record, while the oldest reported occurred in a woman 57 years of age.<sup>8</sup> Endometriomas of the umbilicus occur during the menstrual life, are small and slow growing, becoming swollen and discharging bloody fluid during the menstrual period in approximately 50 per cent of the cases. These symptoms are cyclic reappearing with the menses. However, the majority of the cases presented a normal menstrual history, although cases suggesting irregularity, attended with dysmenorrhea and profuse bleeding have been reported by Andrews,<sup>9</sup> Schiffman and Seyfert,<sup>8</sup> Baltzer<sup>10</sup> (in his second case), and Roques.<sup>11</sup> In those cases in which surgical investigation has been effected, the findings were diversified. The

presence of these tumors in association with an umbilical hernia is more than coincidental, as reported by Mintz,<sup>12</sup> and Keitler<sup>13</sup> and Lauche.<sup>14</sup> In several cases in which the abdomen was opened, Goddard,<sup>1</sup> Barker,<sup>5</sup> Mahle and McCarty,<sup>16</sup> Keitler,<sup>13</sup> Kohler<sup>17</sup> and Roques<sup>11</sup> discovered that the findings were normal with no associated endometriosis of the uterus or other peritoneal structures. In contradistinction to these reports, Baltzer<sup>10</sup> and Mintz<sup>12</sup> found generalized endometriosis of the peritoneum, ovary, appendix and sigmoid. Fibromyomas, as well as ovarian tumors, were discovered in the following cases: Stacy et al.,<sup>6</sup> and Kenne and Kimbrough.<sup>15</sup> These varied and opposing findings are of considerable importance in speculating as to the causation of this entity.

## REPORT OF CASE

Mrs. N. A. was referred to the surgical service on March 8, 1948, with a diagnosis of acute appendicitis.

*Chief Complaint.*—Pain in the right lower quadrant, nausea and vomiting.

*History.*—The patient stated that her most severe attack of pain occurred a day prior to admission. The pain was located to the right of the umbilicus and lasted one hour, after which she was somewhat relieved. After midnight of the same day, the pain recurred, was of great severity and was accompanied by nausea but no vomiting. Morphine by hypodermic was sufficient for periodic relief. The patient stated that for several years she had been troubled with similar pain in the right lower quadrant. This pain lasted for a few minutes to a half hour, was referred from front to back, and was knife-like in nature. There had been no previous operations or serious illnesses.

*Menstrual History.*—The menstrual history revealed three pregnancies, three normal deliveries and three children living and well. Her menses had been regular, occurring every three and one half to four weeks, and lasting four to five days. These were accompanied by backache and cramps. Her latest menstrual period was two weeks prior to her present hospital admission. Following the physical examination and upon further interrogation, the patient stated that bleeding from the umbilicus occurred simultaneously with her menses for a period of eight years.

*Physical Examination.*—The patient was a well nourished, well developed, white female, 49 years of age, lying in bed in some apparent pain and discomfort. Weight was 135 pounds. Blood pressure was 138/80, pulse 90 and temperature 99.4 F. Head and neck were essentially normal with the thyroid not palpable. The breasts were normal in appearance and negative to palpation. The chest was normal to percussion and auscultation with no rales audible. The abdomen was not distended and there were no visible masses except a small nodularity in the umbilicus. Extremities were normal

Chief of Surgical Service, Menorah Hospital, Kansas City.  
Associate, Surgical Service, Menorah Hospital, Kansas City.  
Resident in Department of Radiology, Menorah Hospital, Kansas City.

**Vaginal Examination.**—The introitus was normal. The bimanual examination revealed a mass, spherical in shape and the size of a large orange, in the right adnexa. This mass was not connected to the uterus, which was lying in the normal anterior position. There was a definite rigidity noted to the examining hand in the lower right quadrant but the maximum tenderness was over McBurney's point. Definite increase in pain was noted by the patient upon movement of this pelvic mass. Close examination of the umbilicus revealed a small tumor lying within the umbilicus, nodular in appearance and possessing a cyanotic hue (fig. 1).

**Laboratory Report.**—Urinalysis revealed a specific gravity 1012, no albumin, no sugar, one white blood cell



Fig. 1 Umbilicus revealing slight nodularity and cyanotic discoloration.

and a few mucous threads per high power field. Blood count was Hb. 80 per cent, red blood cells 4,250,000, white blood cells 7,100. Differential count showed 70 per cent polymorphonuclears, 5 per cent monocytes, 25 per cent leukocytes and 5 per cent stabs. Wassermann and Kline tests were negative.

**Radiologic Report.**—A scout plate revealed a paralytic ileus of both large and small bowel. A gastro-intestinal series revealed no abnormalities in either upper or lower intestinal tract.

**Preoperative Impression.**—(1) A right ovarian cyst with a twisted pedicle. (2) Endometrioma of the umbilicus.

**Operative Report.**—At operation the umbilicus, uterus, right tube and ovary, left tube and ovary and the appendix were removed. Recovery was rapid and complete.

**Pathologic Report.**—(a) Macroscopic: The umbilicus measured 4 by 2½ cm., in the center of which was a hard, blue tumor nodule, measuring 2 by 1½ cm. The uterus was totally extirpated. There were several hard, elastic, encapsulated tumor nodules varying in size from 1½ to 4 cm., and one submucous tumor 3½ by 2 cm. The tubes appeared normal; the right ovary was cystic and appeared spherical. The cut section was occupied mostly by a single cyst filled with a brown, hemorrhagic, tenacious material. The other ovary measured 1 by 4½ cm.

(b) Microscopic: The uterine mucosa appeared thin and the glands were in a state of early differentiation. The tumor of the uterus represented a typical fibromyoma. Section through the ovaries showed a hemorrhagic cyst which was lined with a single layer of epithelial cells. Section through the umbilicus showed that between strands there was a dense, fibrous tissue which was poor in nuclei and contained islands of

uterine mucosa. The uterine glands were in a resting stage. Many of the glands were distended and contained hemorrhagic material. The surrounding stroma revealed lamellated fibrous tissue about the glands. There were multiple areas of brownish pigment.

(c) Diagnosis: (1) Serous hemorrhagic ovarian cyst; (2) endometrial tissue in umbilical section; (3) fibromyoma of uterus.

#### SYMPTOMS

The chief symptoms of endometriosis of the umbilicus are tenderness over the umbilicus, itching, swelling, cyanosis and redness. The swelling and redness are more pronounced preceding the menstrual period and may be accompanied by bleeding. Following the menstrual period, there is a period of quiescence, after which the cycle of symptoms recurs. The durations of symptoms are, however, quite variable. The shortest length of time reported is two months and the longest nine years. Palmen<sup>19</sup> reports a case in which he suggests an involvement since childhood, the patient being 48 years of age at the time of surgery.

#### DIFFERENTIAL DIAGNOSIS

Angiomas of the umbilicus may simulate the appearance of endometriomas and this must be considered in the differential diagnosis. In addition, a fistulous tract extending from the uterus and associated with hemorrhagic imbibition during the menstrual period, has been mistaken for the primary umbilical condition. Hemorrhagic traumat-



Fig. 2. Cross section of umbilicus demonstrating gross areas of hemorrhage surrounded by dense tissue.

ic extravasation and cellulitis in and about the umbilicus may be confused with an endometrioma.

#### PATHOLOGY

The usual gross picture of the tumor is that of a single nodule or tumor lying deep in the umbilicus. Some cases have been reported with multinodular and papillomatous appearance to the tumor, but these represent only a paucity of cases. Pinpoint openings through which the discharge is seen to escape are reported by some. These tumors are not



encapsulated and merge with the surrounding connective tissue. The cut surface (fig. 2) reveals a pearly or creamy, grayish appearance with coarse trabeculae or fasciculi of radiating, fan shaped bands of connective tissue coursing through the specimen. Brownish or reddish areas are scattered throughout the specimen, depending on the stage of hemorrhage.

**Histologic Appearance.**—The histologic (fig. 3) appearance is characteristic and, with a few exceptions, identical in all specimens. The skin is hypertrophied, the papillae deepened, the basement membranes smooth and intact. Brownish pigment and deposits of red blood are frequently reported in deep layers of the epidermis. In numerous areas, gland-like structures appear. The glands are surrounded by compact cellulae stroma, composed of round and spindle shaped cells with large, round or oval, deeply staining nuclei. Many of the cystic areas contain desquamated epithelial cells, some of which are of recent origin while others are old. In many, multiple large masses of lymphocytes are present.

#### THEORIES OF HISTOGENESIS

An extensive amount of work has been done in attempting to verify various theories which have been presented since the first known report by Von Rokitansky<sup>20</sup> in 1860. To add more than a generalized classification of the theories would be futile and we find it easier to refer to the complete collective review by Brooks Ranney.<sup>21</sup>

Theories of histogenesis can be divided into three general groups: (1) that endometrial tissue is transported from the uterus to its pathologic location; (2) that the endometrial tissue can develop from local tissues; (3) a combination of these theories.

In 1921, when Sampson<sup>22</sup> postulated his theories of implantation, he perpetuated an increasing investigation of this disease. Since his original feeling of direct implantation did not satisfy all conditions as noted clinically, he gradually added the theories of (a) transplantation of surgical scars, and (b) metastatic spread.

However, many men, principally Novak<sup>23</sup> and Meyer,<sup>24</sup> felt that Sampson's postulations would not satisfactorily explain all the types of clinical endometriosis. They were of the opinion that the primitive mesenchymal cell, as in the progenitor of the uterus, the mullerian ducts, could easily undergo metaplasia, and reproduce a uterine mucosal type of tissue. Thus they evolve the coelomic metaplasia theory.

In 1933, King<sup>25</sup> advocated an ovarian metaplasia theory, stating that the origin of the cellular differentiation arose from the germinal and granulosa cells of the ovaries.

At the most, there is enough experimental work to prove and disprove some phase of each theory. No single observation has been satisfactory in explaining this interesting condition, and a great

deal of work is still warranted in approaching an organized idea to explain the variation of findings in this disease.

#### CONCLUSION

1. There have been relatively few cases of endometrioma of the umbilicus reported in the literature.

2. It occurs in women during the menstrual age, predominating in the third and fourth decades of life.

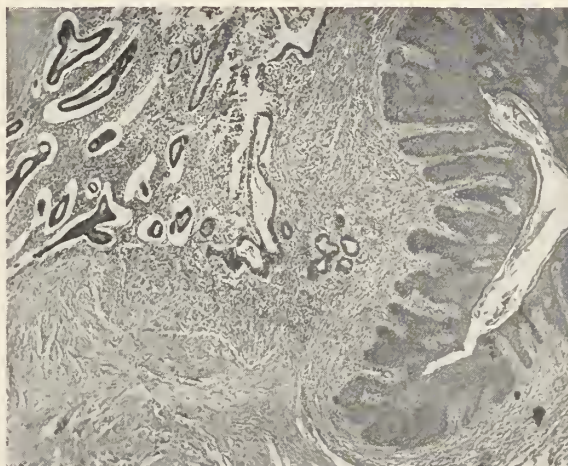


Fig. 3. Microscopic evidence of uterine mucosal tissue.

3. The umbilical adenomyosis may or may not be associated with pelvic endometriosis.

4. The theories are quite variable in explaining its histogenesis. Although all the theories have some plausible factors, no single idea explains all conditions seen clinically.

Menorah Hospital.

#### BIBLIOGRAPHY

1. Goddard, S. W.: Two Umbilical Tumors of Probable Uterine Origin, *Surg., Gynec. & Obst.* 9:249, 1909.
2. Cullen, T. S.: Umbilical Tumors Containing Uterine Mucosa or Remnants of Muller's ducts, *Surg., Gynec. & Obst.* 14:479-494, 1912.
3. Spitz, H.: Endometrioma of the Umbilicus, *Am. J. Clin. Path.* 2:155-177, 1932.
4. Chapman, H.: Endometrioma of the Umbilicus, *West. J. Surg., Obst. & Gynec.* 48:496-499, 1940.
5. Koslowski, B. S.: Ein Fall Von Wahren Nabeladenom, *Deutsche Ztschr. f. chir.* 69:469-473, 1903.
6. Stacy, L. J., Offutt, O. G., and Moench, L. M.: Adenomyoma of the Umbilicus, *Am. Clin. N. Amer.* 10:671-678, 1926.
7. Enzer, N.: Endometriomyoma of the Umbilicus, *Arch. Path.* 10:879-886, 1930.
8. Schiffman, J., and Seyfert, W.: Win Nabeladenom, *Arch. f. gynec.* 127:208-225, 1926.
9. Andrews, H. R.: A Cast of Endometrioma of the Umbilicus, *J. Obst. & Gynec.* 32:545, 1925.
10. Baltzer, H.: Über heterotope endometriode. Wucherungen insbesondere am Nabeladenom, *Zentrbl. f. gynec.* 53:99-102, 1929.
11. Roques, F.: Endometrial Tumor of the Umbilicus, *Proc. Royal Soc. M.* 21:538-541, 1928.
12. Mintz, W.: Das Wahre adenom des Nabels, *Deutsche Ztschr. f. chir.* 51:545-551, 1899.
13. Keitler, H.: Umbilicus Tumor with Vicarious Menstruation, *Monatschr. f. Geburtsh. u. Gynak.* 64:171-192, 1923.
14. Lauche, A.: Die extragenitalen heterotopen Epithewucherungen von Bau der uterus-schleim-haut (fibroadenomatosis seroeipithelialis), *Arch. f. path., Anat. u. phys.* 243:298-372, 1923.
15. Barker, A. E.: Three Cases of Solid Tumors of the Umbilicus in Adults, *Lancet* 2:128-130, 1913.
16. Mahle, A. E., and McCarty, W. M.: Ectopic Adenomyoma of Uterine type, *J. Lab. & Clin. Med.* 5:218-228, 1920.

17. Kohler, R.: Adenomyosis des Nabels, Zentrbl. f. gynak. 51:2201-2210, 1927.  
 18. Keene, F. E., and Kimbroughs, R. A.: Endometriosis, J. A. M. A. 95:1164-1168, 1930.  
 19. Palmen, A. J.: Zur Kenntnis der Nabeladenome, Acta chir. Scandinav. 62:310-328, 1927.  
 20. Rokitsansky, von: Ztschr. ges. Aerts. Ukin. 37:577, 1860.

21. Ranney, B.: Etiology of Endometriosis, Surg., Gynec. & Obst. 86:313-333, 1948.  
 22. Sampson, J. A.: Arch. Surg. 3:245, 1921.  
 23. Novak, E.: Gynecological and Obstetrical Pathology, 2nd ed., Philadelphia, W. B. Saunders, 1947.  
 24. Meyer, R.: Ztschr. f. Geburtsh. u. Gynak. 49:32, 1903.  
 25. King, E. J.: Surg., Gynec. & Obst. 53:22, 1931.

## TRANSURETHRAL PROSTATECTOMY

A REVIEW OF ONE HUNDRED CASES

J. BYRON BEARE, M. D., *St. Louis*

and

CARL A. WATTENBERG, M. D., *St. Louis*

THE DEVELOPMENT and perfection of the transurethral method of operating for the relief of urinary obstruction as a result of prostatic enlargement has been one of the most noteworthy advances in modern urology. The use of this method has resulted in a marked lowering of the immediate post-operative mortality, much less discomfort for the patient, earlier ambulation and a greatly decreased number of hospital days, this last resulting in less expense to the patient.

Because this type of operation has been and can be applied in a much wider scope than originally was thought possible, one now can offer relief to the extreme aged, the debilitated and the poor risk patients who in years past have been forced to lead a permanent catheter type existence.

The purpose of this paper is to summarize one hundred consecutive cases of prostatic obstruction, all operations being done by the transurethral method. The Thompson resectoscope was used exclusively.

In table 1 are listed some of the important facts regarding the hundred patients.

Table 1. Benign Prostatic Hyperplasia, 91 Cases;  
Adenocarcinoma, 9 Cases

Age	Maximum 89 yrs.	Minimum 32 yrs.	Average 65.5 yrs.
Preoperative Residual	700 cc.	None	240 cc.
Duration of Symptoms	10 yrs.	1 mo.	3.7 yrs.
Postoperative Hosp. Days	27	3	9.1
Wt. of Tissue	60	3	20.1

The number of cases in each age decade is shown in table 2.

### PREOPERATIVE MANAGEMENT

We believe the elderly patients with prostatic obstruction should be taken care of differently than any other. Obviously, confinement in bed is

not recommended, as this tends to lower the blood pressure with resultant predisposition to vascular accidents.

Catheter drainage never is used unless the patient enters in acute retention and surgery must be delayed from thirty-six to forty-eight hours in order to complete the general examination, or unless he shows a renal insufficiency as indicated by an elevated blood urea or nonprotein nitrogen. In this regard, one need wait only until the urea is stabilized to proceed with safety. Parenteral fluids need

Table 2. Age of Patients

Years	No. of Cases	Percentage
40 - 50	9	9
50 - 60	18	18
60 - 70	38	38
70 - 80	33	33
80 - 90	3	3

not be administered if the man can take from 2,500 to 3,000 cc. by mouth. In the event that intravenous fluids are used, it is felt that 5 per cent glucose in water is sufficient since it is easy to overload the system with sodium chloride, which might result in retention of water in the tissues. In all cases of elevated urea, one must pay particular attention also to the acid-base equilibrium, as evidenced by the  $\text{CO}_2$  combining power. By the judicious use of Hartman's solution or  $\text{NaHCO}_3$ , one can supply sufficient base to combine with the excess urea, even if the patient is quite acidotic.

We feel that cystoscopy should be carried out immediately prior to resection in all cases in which the diagnosis can be established positively by the history and physical examination alone. Only those patients, concerning whom there is some doubt as to the need for resection, should be subjected to the two procedures at separate times. Perhaps one exception to this rule is the case of the extremely bad risk in which time is all important. In this group the five minutes under anesthesia needed for cys-



toscopy can better be used to resect. In addition, one can determine how the patient will react generally to an extremely small amount of anesthesia and simple cystoscopy. It gives some idea as to how he will tolerate the resection, as well as guides the surgeon in his plan of attack.

In our opinion, the vas deferens should be ligated bilaterally in all cases. Perhaps there are those who do not agree, but we feel that the two to three minutes required to carry out this simple procedure are justified in that it prevents epididymitis as a complication regardless of how low the percentage of such a complicating factor may be.

A careful work-up should be carried out by the internist prior to surgical procedure. Especially is this true of the patient who is an extremely bad risk. However, it has been our experience that these elderly men tolerate surgery much better within the first forty-eight hours after admission than they do at a later date and, because of this, we prefer to operate within that time unless some definite reason is found for delaying the resection.

#### OPERATION

With few exceptions we have used sodium-pentothal anesthesia, supplemented with nitrous oxide and oxygen. Proper use of the latter agents enables one to use less pentothal and, consequently, most patients awoken on the table before being returned to their rooms.

The technic of resection is now well standardized. All recognize the fact that cutting a gutter or channel through the prostatic urethra is entirely inadequate and that the postoperative results are disappointing. One can state emphatically and without fear of contradiction that the success of transurethral prostatic resection is directly proportionate to the completeness of removal of the prostate. The majority of patients who have untoward postoperative symptoms are those who still have prostatic tissue remaining. This is also the group which develops a recurrence of symptoms some twelve to eighteen months postoperatively. That the skilled resectionist can well nigh perform a prostatectomy has been shown by Emmett<sup>1</sup> as follows: During 1912 to 1931, 3,629 prostates were removed either perineally or suprapubically at the Mayo Clinic with an average weight of 44.1 gram. During 1937, 782 resections were done with an average weight of 23.1 gram. If those cases of 10.0 gram or less were eliminated (200), then the average weight would be 30.8 grams. And we are certain that more complete resections are being done today than in 1937.

One hears of great numbers of large prostates being removed suprapubically. Emmett has shown that in this same group of more than 3,000 prostate glands removed suprapubically or perineally, only 7.3 per cent weighed more than 100 grams.

Table 3 shows weights of prostatic tissue removed from the various groups of patients reported upon in this summary.

Because the risk of operation among elderly

patients varies in direct proportion to the time consumed, time of operation must be short. Such patients can tolerate two fifteen minute procedures two to three days apart, while in many instances they may not survive one thirty minute procedure. Blood loss should be kept at an absolute minimum and if more than normal bleeding does occur, the blood pressure must be maintained with glucose, plasma or blood.

Postoperative strictures can and should be prevented rather than treated, first of all by the use of proper sized instruments. Meatotomy must be carried out if the meatus will not admit easily the

Table 3. Weight of Prostatic Tissue Removed

Wt. in Grams	No. of Cases	Percentage
0 - 10	33	33
10 - 20	29	29
20 - 30	19	19
30 - 40	10	10
40 - 50	6	6
More than 50	3	3

30 Fr. sound. Actually, the entire urethra should dilate easily to 30 Fr. for the most adequate handling of the instrument. Proper lubrication of instruments and careful passing of these through the urethra will help prevent strictures.

A strict aseptic technic is necessary and important. Certainly one will find a much higher percentage of postoperative febrile reactions in those patients in which there has been careless asepsis.

We have been entirely satisfied with water as an irrigating solution during operation, as long as the water pressure is not too high, and with N-saline as a postoperative irrigating solution. In our experience, the use of 4 per cent glucose for irrigation during the operation, as advocated by Creevy, is not entirely necessary. In addition, it increases considerably the nurse's problem of caring for instruments.

#### POSTOPERATIVE CARE

We prefer to use a three-way Foley type catheter and institute continuous closed irrigation for the first twenty-four hours. This will not permit one to be careless about hemostasis, but it does keep the patient comfortable, lessen the nursing problem and minimize the chances for gross contamination of the operative site postoperatively. We prefer to use a 24 Fr. catheter and not remove until we are ready to have the patient void.

With few exceptions all patients are out of bed and sitting in a chair the day after the operation. We always allow the catheter to drain and never cork it. Early ambulation of patients cannot be over emphasized.

The catheter generally is removed in from forty-eight to seventy-two hours and in most cases the patient voids with a freedom he has not known for

some time. Obviously, if there is any difficulty the catheter should be re-inserted for forty-eight hours and the patient given another trial. If there is still difficulty, one should perform another cystoscopic examination and be prepared to remove more tissue since that will be the cause of the trouble in most cases.

Within forty-eight hours after the catheter has been removed the patient can be discharged to his home. It is advisable for the patient to remain within easy access to the urologist for the first twelve to fourteen postoperative days. Some patients who live a long way from the city prefer to remain in the hospital for the entire period. In such cases, the number of postoperative hospital days, as shown in tables 1 and 4, is necessarily greater.

Table 4. Number of Postoperative Hospital Days

Days	No. of Cases	Percentage
0 - 5	10	10
5 - 7	35	35
7 - 9	18	13
9 - 11	19	19
11 - 13	5	5
13 - 15	3	3
More than 15	10	10

After two weeks postoperative care, bleeding can well nigh be forgotten because with the Thompson type resectoscope one does not have any secondary slough and bleeding. Most patients continue to improve and arrive at the stage of maximum benefit in from six to eight weeks, at which time the urine should be entirely free of infection. If this is not true, a short course of chemotherapy will clear up the infection promptly. We do not check for residual urine postoperatively until the fourth week. Chemotherapy is of little value postoperatively, insofar as eradicating infection is concerned, until the prostatic bed is healed, and since this does not occur until from six to eight weeks after surgery, we feel that such therapy is contraindicated until that time.

Our mortality rate in this series of 100 cases was 1 per cent. It serves to emphasize that with careful management transurethral prostatectomy can be performed with much less risk than any other type of prostatic surgery.

#### RESULTS

One must admit at the onset that the oldest follow-up in this series is thirteen months, and hence one can make no claims as to permanency of results.

In a large series of transurethral prostatectomies published by G. J. Thompson,<sup>2</sup> it was found that in patients with adenomatous enlargement 5 per cent had a recurrence of symptoms in ten years. This seems negligible indeed when one remembers the average life expectancy of this age group of patients.

In an analysis of table 5, showing the results of operation, the term "excellent" denotes "no residual urine." The patient voids with a good stream, has a nocturia of none to one time and the urine is microscopically normal.

Table 5. Results of Transurethral Prostatectomy in 100 Consecutive Cases

Results	No. of Cases	Percentage
Excellent	75	75
Good	17	17
Fair	5	5
Poor	3	3

"Good" results signify that the patient empties the bladder completely, voids well, but has nocturia of one to two times and the urine contains one to five white blood cells per high power field. In this regard, one should say that even though some patients empty the bladder completely, the urine does not become microscopically normal. Nevertheless, these patients feel well, void with no difficulty and appear to be in an excellent state of health in every way. In this group we do not consider the infection significant.

Those patients with a "fair" result persist with residual urines of five to fifty cc., nocturia of two or more times, some hesitancy and a decrease in the caliber of the stream. This group has not had another cystoscopic examination, but undoubtedly some obstructing tissue still remains. However, in this group are included those patients who are quite old with little life expectancy ahead of them. They void pretty well and are comfortable. In other words, the functional result is fine. Hence, we feel that further surgery is contraindicated since the slight increase in improvement to be gained does not justify the means of obtaining it.

The "poor" results denote incomplete emptying, infection of the urine, poor stream and nocturia. In other words, the obstructive symptoms are still present and have been improved only slightly. In this group, of course, is the one death. This patient had severe syphilitic heart disease and a neurogenic bladder. He was quite debilitated and we feel sure the forty-five minutes of surgery was too much for him. If the procedure had been divided, he might have survived. The other cases in this group represent incomplete resections with tissue still remaining as has been shown by cystoscopy. A second stage operation is indicated and planned.

#### CONCLUSION

In conclusion, we feel that the results of transurethral resection at the hands of an experienced surgeon are superior to those obtained by any other type of prostatic surgery.

3720 Washington Ave.

#### BIBLIOGRAPHY

1. Emmett, J. L.: Recent Developments in Transurethral Prostatectomy. *Arch. Phy. Ther.* 20:473-480 (August) 1939.
2. Thompson, G. J., and Habein, H. C.: Transurethral Prostatic Resection. A Review of 1200 Cases of Patients More Than Seventy Years Old. *Am. J. Surg.* 45:27-32 (July) 1939.



## FIVE YEAR RESULTS OF CANCER TREATMENT AT THE ELLIS FISCHEL STATE CANCER HOSPITAL

A REPORT TO THE PHYSICIANS OF MISSOURI

JOHN MODLIN, *Columbia, Mo.*

THE ELLIS FISCHEL State Cancer Hospital has now been in operation for a period of nine years, and a report of the five year results of treatment at the hospital should be of interest to the physicians of Missouri. A vigorous follow-up system has permitted accurate evaluation of more than 95 per cent of all cancer patients seen up to the present time and, despite the fact that the opening years of the institution are represented, less than 10 per cent of the patients were lost to follow-up during the period covered by the present survey—May 1940 to May 1943.

The majority of reports dealing with the results of cancer therapy are based on selected material, and conflicting reports of the curability of different types of cancer are constantly appearing in the literature. Such statistics add little to the understanding of the general cancer problem. Ottenheimer<sup>1</sup> has illustrated that by selection of cases, the curability figures for cancer of the rectum in Connecticut can be quoted anywhere from the approximately correct figure of 8 per cent to the optimistic high of 35 per cent (table 1). There is great

Table 1. Five Year Curability Cancer of Rectum Computed by Various Methods (Ottenheimer)

Basis of Calculation	Percentage No. of Cases	
	Five Year Survival Percentage	Five Year Cures Percentage
All cases	12.8	7.9
All proved cases	16.5	11.2
All proved determinate cases	16.9	11.5
All cases of resection	25.3	15.6
All cases of resection except those with remote metastases	26.6	17.3
All resection cases surviving operation	32.0	20.8
All resection cases surviving operation except those with remote metastases	35.4	23.0

need for cancer curability studies that portray clearly the true end results in all cases seen,<sup>1, 2</sup> and it is hoped that the diffusion of knowledge concerning the actual overall curability of cancer will act as a stimulus toward earlier diagnosis and treatment, the only means by which improved results can be obtained with existing methods of cancer treatment.

A total of 3,540 patients was examined at the hospital between May 1940 and May 1943, 2,318 (or 65 per cent) of whom presented themselves with cancer. In order to evaluate the five year results

in this latter group, the following details are emphasized.

1. Five year absolute cures include only those patients who lived five years or more without evidence of cancer when last seen.

2. Results have been computed on the basis of all cases seen whether or not treated, and indeterminate cases are included.

3. All patients were medically indigent and, when first seen, a high percentage had advanced cancer. By way of illustration, in a series of 100 consecutive cancers of the breast, sixty-two were

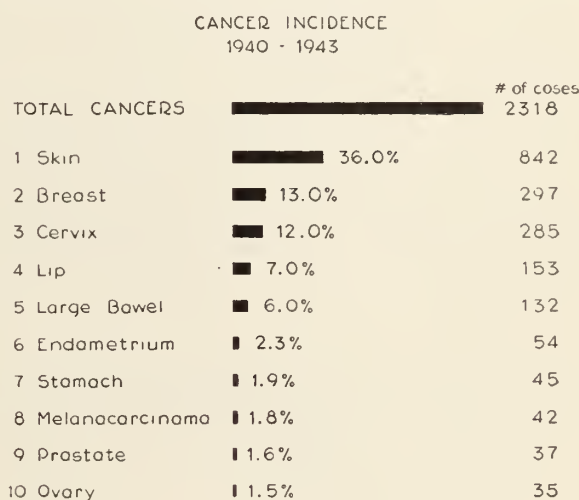


Fig. 1.

adjudged categorically inoperable and in the thirty-eight patients operated, 74 per cent were found to have axillary metastases.<sup>3</sup>

4. The clinical management of the patients in this series was conducted by a fulltime staff consisting of a radiotherapist, surgeon and pathologist, devoting their efforts exclusively to cancer therapy.

5. The follow-up percentage was more than 90 per cent.

### CANCER INCIDENCE

Figure 1 gives the percentage frequency of the ten most common types of cancer seen at this hospital. Skin cancer far outranked all other types, and an overwhelming number of these lesions were located on the exposed portions of the body; i.e., skin of the head and neck, and dorsum of the hands. The great majority of these patients were farmers with a history of prolonged exposure to sunlight.

Apart from patients with cancer of the skin, the

Chief Surgeon, Ellis Fischel State Cancer Hospital.  
Credit for the successful follow-up system at the Cancer Hospital is due largely to the efforts of the members of the Social Service Department, headed by Mrs. Miriam Hoag.  
The majority of the patients covered by this survey were seen and treated by Drs. Eugene Bricker and Lauren V. Ackerman, of the Barnes Hospital and Washington University School of Medicine, St. Louis, and by Dr. Theodore P. Eberhard, of Temple University School of Medicine, Philadelphia, Pa.

majority had tumors that could be seen or palpated easily; thus, the true percentage frequency of cancer in Missouri is probably not mirrored by these statistics.<sup>2, 4, 5</sup> Figures from Connecticut<sup>5</sup> would seem to indicate that approximately 40 per cent of all cancer is accessible to physical examination, yet, in this series, approximately 75 per cent proved accessible to such examination. In addition, the incidence of cancer of the stomach was extremely low, emphasizing further the certain natural selectivity of patients that occurred despite the fact that the hospital is devoted solely to the diagnosis and treatment of cancer.

#### CLASSIFICATION OF FIVE YEAR RESULTS

In this review of the five year results of treatment for the years 1940 to 1943, all cancers were placed in the seven categories listed in table 2. An

Table 2. Five Year Results of Treatment at Ellis Fischel State Cancer Hospital

Category I.	Died of cancer.
Category II.	Died of intercurrent disease with cancer.
Category III.	Died of intercurrent disease, no cancer.
Category IV.	Lost to follow-up with persistent cancer.
Category V.	Lost to follow-up, no cancer.
Category VI.	Five year survival with cancer.
Category VII.	Five year absolute clinical cure.

attempt was made to avoid selection of cases; thus, indeterminate and untreated cases are included in the total number from which results were computed. As a consequence of this method of reporting results, the cure rates quoted underestimate the actual overall curability obtained. Nevertheless,

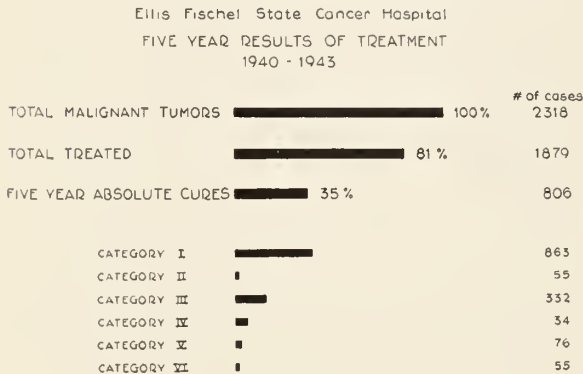


Fig. 2.

it is believed that the actual overall curability of all patients seen at the Ellis Fischel State Cancer Hospital (figure 2) is approximated more closely by this method than by cure rates computed from selected cases (such as treated cases only). Since the majority of patients were in the older age groups, category 3 (patients who died of intercurrent disease without evidence of cancer) includes an appreciable number of patients who failed to survive five years.

#### CURABILITY OF FIVE MOST FREQUENT TYPES OF CANCER

Cancer of the skin, breast, cervix, lip and large bowel comprised three fourths of all cancers seen

at the hospital between 1940 and 1943. The individual five year curability rates are presented in figures 3 to 7 inclusive.

**Cancer of the Skin.**—These lesions accounted for 35 per cent of the malignant tumors. (Melanocarcinoma is not included in this figure). While only 59 per cent of these patients fall into the five year absolute cure category (figures 3), an additional

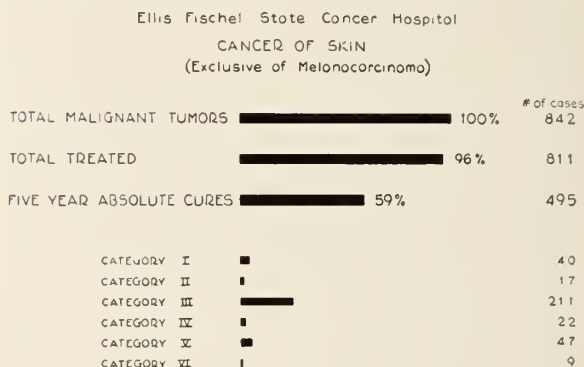


Fig. 3.

25 per cent died without evidence of cancer before the five year period was reached. In all but a minority of cases, skin cancer has proved to be highly curable by either surgical excision or by irradiation and, actually, less than 10 per cent of these patients died of cancer.

**Breast Cancer.**—The results of treatment in 297 patients with cancer of the breast are disappointing (figure 4). Although 67 per cent of these patients were subjected to radical mastectomy, only 16.5 per cent of the 297 patients seen lived five years without evidence of disease. It is significant that 60 per cent of the patients are known to have died of cancer. The cure rate obtained may appear exceedingly low when compared with more favor-

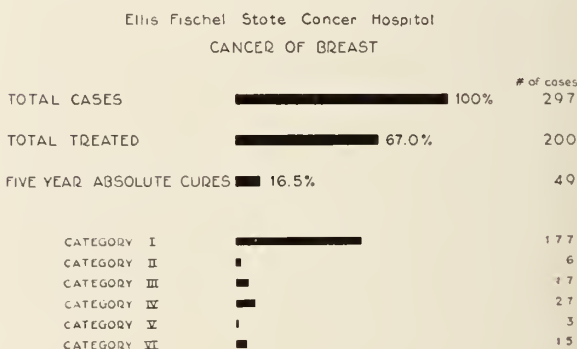


Fig. 4.

able statistics (usually quoted from operable cases only), but it is to be noted that a 22.2 per cent overall five year curability has been reported by Haagensen and Stout<sup>6</sup> in all patients seen at the Presbyterian Hospital in New York.

Unfortunately, there seems to be little improvement today toward earlier diagnosis of these lesions, and it is doubtful that more than 20 per cent



of the patients treated at the present time will be free of recurrence five years from now. Since more rigid criteria of operability are followed at the hospital today, fewer patients are being operated upon, yet the five year cure rate in all probability will remain at least as high as it was at the time of this survey.

**Cancer of the Cervix.**—These lesions accounted for 12 per cent of all malignancies, being outranked by cancer of the breast by a few cases. The five

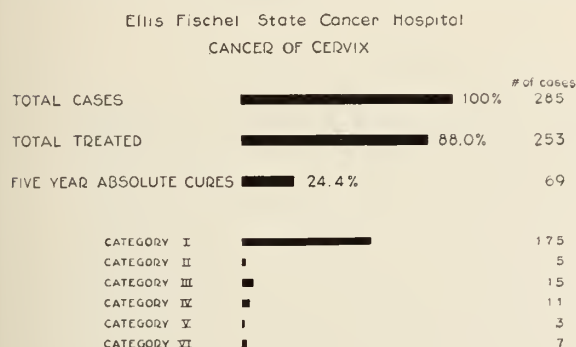


Fig. 5.

year absolute cure rate of just under 25 per cent has been computed on the basis of all cases seen at the hospital prior to May 1943, but 12 per cent of these cases, for various reasons, received no treatment (figure 5).

**Cancer of the Lip.**—With the high percentage of skin cancer seen, it is not surprising that cancer of the lip amounted to 7 per cent of all malignancies (figure 6). These lesions outranked cancer of the colon, stomach and prostate and, here again, the deterrent to a higher five year absolute cure rate was the high death rate from intercurrent disease.

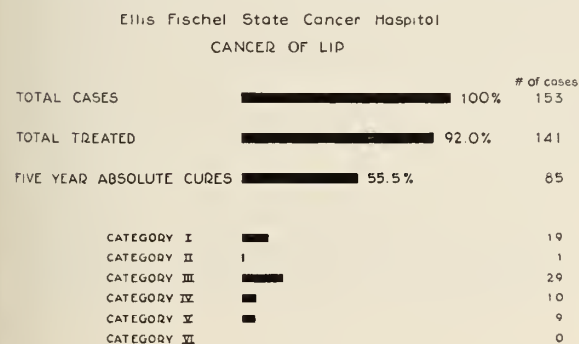


Fig. 6.

Actually, less than 13 per cent of these patients are known to have died of cancer. The majority of the lesions were located on the lower lip and were treated either by surgical excision or by irradiation. Since metastases to the cervical lymph nodes from cancer of the lower lip occurred infrequently in the patients followed at the Cancer Hospital, the majority did not receive neck dissection as a prophylactic measure. In 233 such patients with cancer of the lower lip who were admitted

without clinical evidence of cervical metastases, only 6 per cent later developed metastases.<sup>7</sup>

**Cancer of the Colon and Rectum.**—The incidence of large bowel cancer in this series (figure 7) was probably below the actual occurrence of these lesions in Missouri. In the Connecticut series, large bowel cancer accounted for more than 15 per cent of all cancer, while at The Ellis Fischel State Cancer Hospital these lesions made up only 6 per cent of the total cases. Although the five year absolute cure rate was 22 per cent of all cases seen, it is pertinent to note that this figure represents approximately half of those resected. Despite the present higher resectability of these lesions at the Ellis Fischel State Cancer Hospital (87 per cent of seventy patients seen in 1947 and 1948), and the concomitant lower mortality (1.7 per cent in 1947 and 1948), it should be realized that the overall five year absolute cures will not increase proportionately. As is well known, the present increasing

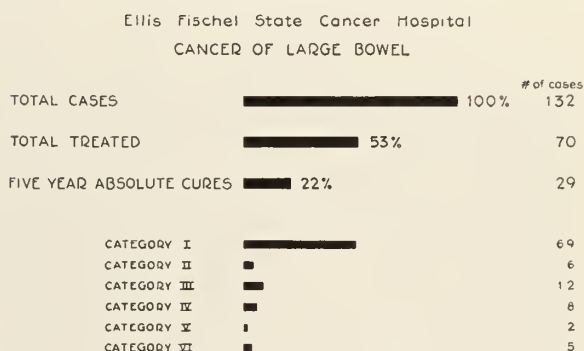


Fig. 7.

resectability rates represent not earlier diagnosis but improvements in surgical management that permit resection of the more advanced lesions. The 22 per cent five year absolute cure percentage for large bowel cancer, while disappointing, is undoubtedly an optimistic figure when viewed in the light of probable overall curability of these lesions in Missouri. Ottenheimer<sup>1</sup> has quoted a five year cure rate of 12 per cent in the histologically proved rectal cases in Connecticut, and 8 per cent in all cases reported.

#### SUMMARY

A survey of the five year results of treatment at the Ellis Fischel State Cancer Hospital (May 1940 to May 1943) has revealed an overall absolute five year cure rate of 35 per cent of 2,318 cancers seen. While a satisfactory rate of cure has been obtained following treatment of some types of cancers (i.e., cancer of the skin and lip), disappointing results have followed the treatment of cancer of the breast, the second most common type of cancer seen at the hospital. A high proportion of the breast lesions were in an advanced stage when first seen and, even today, there seems to be little improvement toward earlier diagnosis.

The results of treatment have been calculated from unselected material and the figures quoted

may seem unduly low to those who are familiar with statistics from selected material (such as cure rates in operable cases). It is hoped that the adoption of more uniform methods of computing cancer curability will act as a stimulus toward earlier diagnosis and treatment, the chief means by which improved results from present methods of cancer therapy can be realized.

## BIBLIOGRAPHY

1. Ottenheimer, E. J.: Cancer of the Rectum; an Analysis of

Cases Occurring in Connecticut During 1935-1945, New England J. Med. 237:1-7, 1947.

2. Ougherton, A. W.: The Cancer Problem. Rocky Mt. Med. J. (May) 1948.

3. Ackerman, L. V.: A Report to the Physicians of Missouri. J. Missouri M. A. 40:276-279 (September) 1943.

4. Levin, M. L.: Cancer Reporting in New York State, New York M. J. 44:880-883, 1944.

5. Macdonald, E. J.: The Present Incidence and Survival Picture in Cancer and the Promise of Improved Prognosis, Bull. Am. Coll. Surgeons (June) 1948.

6. Haagensen, C. D., and Stout, A. P.: Carcinoma of the Breast; Criteria of Operability, Am. Surg. 118:1-32, 1943.

7. Ackerman, L. V., and del Regato, J. A.: Cancer: Diagnosis, Treatment, and Prognosis. C. V. Mosby Co., St. Louis, 1947.

## A METHOD OF USING THE CHEST STRAP FOR PRECORDIAL LEADS

THOMAS S. FLEMING, M.D., *Moberly, Missouri*

MANY METHODS for the application of the chest strap have been purposed. The one presented has several advantages. No special equipment is re-



quired. Other advantages will be given after the method has been described.

*The Method.*—Place the patient in the desired position. The usual 60 inch rubber strap is used. Place the hook or buckle end of the strap above the right nipple at the fourth interspace. Run the strap to the left across the chest at this level in front of the left arm, then around this arm to the chest. It is then carried to the right across the anterior chest, just below the breasts. From this position, it runs under the right arm at this later level to the outside of the arm and around to the hood or buckle end.

The usual precordial electrode is used. The strap will hold the electrode in place better if a small cork is pushed over the central pin (figs. 1 and 2).

Additional advantages of the strap in this position are that it will support the electrode for positions V1 and V2. If V3 is desired, the upper strap may be used. The lower strap will support posi-

tions V4, V5 and V6. If the arms are held close to the body, it will support electrode for C7. In women it is not necessary to change positions of the strap over the breast when taking the various leads. If one wishes to make grams in the upright position, this method is ideal. In tables with no arms, the straps give little support to the patient's arms. A decided advantage is that it is not necessary to place a strap under or behind the patient. This is convenient in the acutely ill patient. There is less movement of the electrode with this method than when the strap is around the entire chest or the electrode is held by the patient or technician.

When potentials high on either side of the chest are desired, as in high lateral infarcts, the upper



strap will hold the electrode. Simply raise the strap higher on either shoulder. Should the Whitten lead be desired, the strap next to the chest will support both electrodes by merely permitting the arms to hang closer to the body.

It is possible that this same strap over the arms may be used to hold the electrodes for the normal standard limb leads.<sup>1</sup>

The only disadvantage is that it will not support the electrodes for leads V7 and V8.

From the Woodland Hospital and Clinic, Moberly, Missouri.  
1. Suggestion by Graham Asher, M.D., Kansas City, Missouri.



## PRESIDENT'S PAGE

Many state and national organizations have adopted resolutions in opposition to compulsory health insurance. Some of these organizations are: American Farm Bureau Federation, General Federation of Women's Clubs, Ameri-



can Legion, American Bar Association, National Federation of Small Business, Inc., Missouri State Chamber of Commerce.

Many local branches of these and other organizations likewise have adopted official resolutions in opposition to compulsory health insurance. All county medical societies should adopt official resolutions and send them to the President of the United States, the Missouri Senators and members of Congress.

Dr. George Lull, Secretary of the American Medical Association, recently stated, "Now is the time to stand up and be counted." Let's stand up and advise our representatives in Congress of our opposition to socialized medicine.

The Committee on Public Policy and Public Relations and the staff at the Association office are ready at all times to help you prepare resolutions and to assist in any way.

*Wallis Smith.*

# THE JOURNAL

of the

## Missouri State Medical Association

623 Missouri Bldg. Telephone: Newstead 0404-05

Subscription . . . \$3.00 a year in advance

*Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent.*

JULY, 1949

## EDITORIALS

### ATLANTIC CITY MEETING

More than 15,000 physicians from all over the world attended the 98th Annual Session of the American Medical Association in Atlantic City, June 6 through June 10.

The outstanding scientific attraction was the color television of surgical and medical procedures. The television program ran continuously beginning June 6 through June 9. It was sponsored by Smith, Kline and French Laboratories. The Medical School of the University of Pennsylvania and the combined staffs of the Hospital of the University of Pennsylvania and the Atlantic City Hospital participated in the presentation.

The Distinguished Service Medal, awarded annually by the Association for meritorious service in the science and art of medicine, was presented to Seale Harris, M.D., Birmingham, Alabama, Professor Emeritus of Medicine at the University of Alabama.

The silver medal, presented annually for scientific exhibits of individual investigators, was presented to Wendell G. Scott, M.D., Sherwood Moore, M.D., Thomas Burford, M.D., and Merl J. Carson, M.D., St. Louis, for their exhibit on "Angiography with the Rapidograph Utilizing Nine-Inch Roll Film in Diagnosis of Congenital Heart Diseases."

More than 100 physicians from Missouri attended the meeting, many of whom took part in the scientific program.

Officers elected are: President-Elect, Elmer L. Henderson, M.D., Louisville, Kentucky; Vice President, James Francis Norton, M.D., Jersey City; Secretary, George F. Lull, M.D., Chicago; Treasurer, Josiah J. Moore, M.D., Chicago; Speaker of the House of Delegates, Frank F. Borzell, M.D., Philadelphia.

### NATIONAL COMMISSION ON CHRONIC ILLNESS FORMED

The groundwork for the first concentrated attack on all aspects of chronic illness was laid in Chicago recently with the creation of a national Commission on Chronic Illness.

Formation of the commission climaxed a year's preparatory work by four national voluntary associations in the medical, public health, hospital and welfare fields to carry out one of the major recommendations of the National Health Assembly in May 1948. These are the American Medical Association, the American Hospital Association, the American Public Health Association and the American Public Welfare Association. Briefly the goals are:

1. To modify the prevailing attitude of society that chronic illness is hopeless; to substitute for the prevailing over concentration on the provision of institutional care a dynamic program designed to prevent chronic illness, to minimize its effects and to restore its victims to a socially useful and economically productive place in the community.

2. To define the problems arising from chronic illness among all age groups, with full realization of its social as well as medical aspects.

3. To coordinate separate programs for specific diseases with a general program designed to meet more effectively the needs common to all chronically ill persons.

4. To clarify relationships among professional groups and agencies working in the field of chronic illness.

5. To stimulate adoption in every state and community of a well rounded plan for prevention and control of chronic illness and for the care and rehabilitation of the chronically ill.

Organized as a nonprofit corporation under the laws of Illinois, the Commission on Chronic Illness is appealing to foundations, professional societies and other voluntary national organizations for funds. It already has received \$20,000 from the American Medical Association and \$2,500 each from the National Society for Crippled Children and Adults and the New York Foundation.

In addition to its contribution, the American Medical Association will provide office space and office equipment for the commission in its Chicago headquarters. Certain staff services will be provided by the National Society for Crippled Children and Adults.

The United States Public Health Service, which has no official connection with the commission, will aid by assigning a member of its service staff to act as executive secretary of the commission until such time as a permanent director assumes office.

Officers of the commission are: Leonard W. Mayo, vice president of Western Reserve University in Cleveland, chairman; Dr. James R. Miller, Hartford, Conn., a member of the American Medical Association Board of Trustees, vice chairman, and J. Douglas Colman, executive director of the Maryland Hospital Service, Baltimore, secretary-treasurer.

The work of the group will be guided between sessions of the full commission by an executive committee consisting of the officers and Dr. Thomas Parran, dean of the School of Public Health of the



University of Pittsburgh, and Mrs. Joseph T. Ryerson, active in Chicago civic affairs.

The full commission will consist of thirty members, representing broad fields of interest.

---

## NEWS NOTES

---

Harold L. Gainey, M.D., Kansas City, was a guest speaker at the Kansas Medical Society annual session on May 11. He spoke on "Prolonged Labor."

Frank M. Grogan, M.D., St. Louis, was appointed superintendent of the St. Louis City Hospital. Dr. Grogan will hold this position in addition to being Hospital Commissioner of St. Louis.

Quinton Tarver, M.D., Kennett, gave the commencement address at the Hornersville High School on May 19.

J. Earl Smith, M.D., St. Louis, was installed as president of the Missouri Public Health Association at a meeting in Jefferson City on May 6.

O. S. Pate, M.D., North Kansas City, has been named the Missouri State Athletic Commission physician.

John C. Howard, Jr., M.D., Kansas City, was one of the speakers in observance of Hard of Hearing Week at a meeting in Kansas City on May 9. His subject was "Damage to Hearing in Industry."

A three-day reunion of Base Hospital 21 of World War I and the 21st General Hospital of World War II was held in St. Louis, May 20, 21 and 22, in observance of the thirty-second anniversary of the departure of Base Hospital 21.

G. D. McCall, M.D., Fulton, was honored on the occasion of the laying of the cornerstone of a new infirmary building of the Missouri School for the Deaf. Dr. McCall was school physician from 1896 to 1945.

Hollis Allen, M.D., St. Louis, was the speaker at a recent meeting of the Kirkwood Lions Club. He spoke on "Compulsory Health Insurance."

George Frankl, M.D., Kansas City, has gone to Vienna, Austria, where he will establish a United Nations child psychiatric clinic.

Alfred Goldman, M.D., St. Louis, was elected president of the Missouri Chapter of the American College of Chest Physicians at its annual meeting. Charles A. Brasher, M.D., Mount Vernon, was elected vice president, and A. J. Steiner, M.D., St. Louis, secretary-treasurer.

Ernest Sachs, M.D., formerly emeritus professor of neurological surgery at Washington University School of Medicine, has gone to Yale University, New Haven, as research professor in physiology.

"St. Louis Is a Cleaner, More Healthful and Better City Because of Doctor Joseph Francis Bredeck. There Can Be No More Enduring Monument to His Memory" is the inscription on a plaque in the memory of Dr. Bredeck which was unveiled in the St. Louis City Hall rotunda on May 26.

Carl D. Siegel, M.D., Sedalia, spoke before the Pettis County R. N. Club on May 3 on "Socialized Medicine."

R. Emmet Kane, M.D., St. Louis, was honored by a dinner at DePaul Hospital, St. Louis, on June 15, given by the Daughters of Charity of St. Vincent DePaul in recognition of fifty years association of Dr. Kane in the Mullanphy Hospital and the DePaul Hospital. Speakers at the dinner were Archbishop Joseph E. Ritter, Mayor Joseph M. Darst, the Rev. John J. Cronin, C.M., and Drs. R. E. Schlueter and E. P. Buddy. Dr. L. D. Cassidy acted as toastmaster.

H H. Kramolowsky, M.D., R. Emmet Kane, M.D., and William P. Glennon, M.D., St. Louis, were made Knights of St. Gregory at a ceremony on June 19.

---

## MUSINGS OF THE FIELD SECRETARY

---

Some 110 people, coming from all parts of the state, attended a meeting of the Missouri Health Council at the Governor Hotel, Jefferson City, on May 11.

The Missouri Health Council was formally organized in July 1948 and had as one of its sponsors the Committee on Rural Medical Service of the Missouri State Medical Association. The objectives of the State Health Council are to bring together statewide organizations and agencies with a fundamental interest in health, for discussion, debate and interchange of opinions and planning; to serve as a clearing house on health problems and programs; to facilitate joint planning in order to encourage coordination of efforts on state and local levels.

Many of those present at the May 11 meeting are active members of the twenty-four county health councils in Missouri through which coordinated efforts are definitely being made to solve various local health problems. A number of these people, both lay and professional, entered into the discussion throughout the day and explained why and how their particular local health councils had been formed and what activities they were engaged in.

The main part of the day's program was centered around an open panel discussion on county health councils. Mr. B. W. Harrison, State Extension Agent, presided at a panel including J. Lester Harwell, M.D., Poplar Bluff, member of the Butler County Health Council; Miss Ida Gutschke, R.N.,

Field Director, Hospital Survey and Planning, Missouri State Division of Health; Otto Aldrich, Butler County Superintendent of Schools and president of the County Superintendent of Schools Association; Mrs. Louis Lueders, Chairman of the State Extension Advisory Committee on Health; and Mrs. Ernest Nold, Savannah, member of the State Extension Advisory Committee on Health.

Some of the activities within the province of county health councils as brought out during the day's discussions are: farm safety programs, nurse recruiting, securing of adequate local health facilities and personnel, insect and rodent control, efforts toward improved sanitation, pure water and milk supplies and improved school health programs.

Professor C. E. Lively, Chairman of the Rural Sociology Department of the University of Missouri summarized the day's discussion and stressed the point that only through effective demand will better health services be secured. Furthermore, he pointed out that effective demand depends upon health education and is the prime factor which moves people to get more and better health services. Dr. Lively quoted some interesting figures bearing upon this problem of health services. From a study of rural-farm morbidity in Missouri now being conducted by the Department of Rural Sociology, Agricultural Experiment Station, University of Missouri, he said the following question recently was asked of 730 farm families in twenty counties: "Have you and members of your family had all the medical services you wanted last year?" Eighty-seven per cent of the replies were "yes" and only 13 per cent of the 730 families replied "no." These figures offer much food for thought.

Mr. Chester Starr, Director of Rural Health Service for the Missouri Farm Bureau Federation and Chairman of the State Health Council, in closing the meeting, asked for frank expressions as to the value of this particular meeting. Numerous complimentary comments were made on the program and by unanimous vote another similar meeting was requested for next year.

## DEATHS

**Waugh, Clifton M., M.D.**, Tarkio, a graduate of Rush Medical College, 1902; Fellow of the American Medical Association; member and former president of the Nodaway-Atchison-Gentry-Worth County Medical Society; aged 73; died April 21.

**Hardy, William F., M.D.**, St. Louis, a graduate of Washington University School of Medicine, 1901; Fellow of the American Medical Association; honor member of the St. Louis Medical Society; aged 74; died May 4.

**Bradley, Arthur H., M.D.**, St. Louis, a graduate of Marion-Sims College of Medicine, 1892; honor member of the St. Louis Medical Society; aged 80; died May 5.

**Duemler, Rutherford S., M.D.**, Seneca, a graduate of the University of Kansas School of Medicine, 1940; Fellow of the American Medical Association; aged 38; died May 7.

**Krueger, Owen W., M.D.**, Kansas City, a graduate of the Kansas City Medical College, 1890; Fellow of the American Medical Association; honor member of the Jackson County Medical Society; aged 84; died May 20.

**Wasson, Wesley B., M.D.**, Nixa, a graduate of the University of Louisville School of Medicine, 1890; Fellow of the American Medical Association; honor member and former president of the Christian County Medical Society; aged 87; died May 20.

**Bosserman, David C., M.D.**, St. Louis, a graduate of the National University of Arts and Sciences, St. Louis, 1914; honor member of the St. Louis Medical Society; aged 70; died May 23.

**Kennedy, Thos. Robert, M.D.**, St. Louis, a graduate of St. Louis University School of Medicine, 1919; Fellow of the American Medical Association; member of the St. Louis Medical Society; aged 52; died May 24.

**Guhman, Charles N., M.D.**, St. Louis, a graduate of Washington University School of Medicine, 1903; Fellow of the American Medical Association; honor member of the St. Louis Medical Society; aged 75; died June 5.

**Ferris, Joseph L., M.D.**, St. Louis, a graduate of St. Louis University School of Medicine, 1917; Fellow of the American Medical Association; member of the St. Louis Medical Society; aged 59; died June 6.

## SOCIETY PROCEEDINGS

### SECOND COUNCILOR DISTRICT

W. F. FRANCKA, HANNIBAL, COUNCILOR

Fifty physicians attended an afternoon and evening meeting of the Second Councilor District at the Merchants Hotel, Moberly, May 26.

The program was developed by the Cancer Committee of the Association in cooperation with the Missouri Division of the American Cancer Society. The following presentations were on the afternoon session:

"The Responsibility of the Practitioner in the Early Pathologic Diagnosis of Cancer," by Hollis Allen, M.D., Department of Pathology, St. Louis University Medical School, and Pathologist at St. John's Hospital, St. Louis.

"What the Practitioner Sees Through the Speculum in the Diagnosis and Treatment of Gynecologic Conditions" by Phil C. Schreier, M.D., Professor of Gynecology, University of Tennessee College of Medicine, Memphis.

"The Diagnosis and Treatment of Tumors of the Lung," by John Mayer, M.D., Department of Chest Surgery, St. Joseph's Hospital, Kansas City.

Following a social hour and a chicken dinner, the evening program was presented.

Wallis Smith, M.D., Springfield, President of the Association, spoke on "Some Food for Thought."

Alfred J. Cone, M.D., Department of Otolaryngology, Washington University School of Medicine, St. Louis, spoke on "The Differential Diagnosis of Esophageal Lesions."

W. F. FRANCKA, M.D., Councilor.

### FOURTH COUNCILOR DISTRICT

OTTO W. KOCH, CLAYTON, COUNCILOR

St. Louis County Medical Society

The St. Louis County Medical Society held its regular meeting on May 11 at 8:30 p. m. in the Health Center, St. Louis County Hospital.

Dr. Koch reported on the meeting of the Council held in Hannibal on May 7 and 8.



On motion of Dr. Schattyn, the following resolution was passed:

WHEREAS, The United States of America has, because of medical and surgical advances made under our free system of enterprise, become the greatest medical center in the world, and

WHEREAS, Because of this advancement in medical skill and scientific achievement, the health of the people of the United States is better than the health of those in any other country, with a lower death rate, and

WHEREAS, The American Medical Association has set up a health program and established a fund produced by assessing each member a sum of \$25.00 which sum is to be used for the purpose of educating the public regarding the government proposed health program; be it therefore.

Resolved, That the St. Louis County Medical Society go on record at this time as approving the action and program of the American Medical Association, and be it further

Resolved, That this St. Louis County Medical Society definitely disapproves the effort made by our government to interfere with the practice of medicine as now existing in this county, and be it further

Resolved, That a copy of these resolutions be mailed to each of our members of the United States Senate and the United States House of Representatives.

Upon motion of Dr. Schattyn it was voted to subscribe to five copies of "American Medicine and the Political Scene" at \$15.00 each, to go to the five officers of the Society.

Dr. Howe introduced four applicants for membership: Drs. Schwartz, Rindskopf, Kotner and Cohle.

A. J. Cone, M.D., St. Louis, spoke on "Difficulties in Swallowing." He spoke on diagnostic methods, treatment procedures and changing concepts of surgical management in this group of conditions. The presentation was supplemented by lantern slides, pathologic specimens and exhibition of a pneumatic esophageal dilator.

ROBERT C. KINGSLAND, M.D., Secretary.

#### SIXTH COUNCILOR DISTRICT

R. W. KENNEDY, MARSHALL, COUNCILOR

Pettis County Medical Society

At a scientific meeting of the Pettis County Medical Society held on April 18, A. E. Upsher, M.D., pathologist to St. Mary's Hospital, Kansas City, and Independence Sanatorium, Independence, spoke on "Pathology of Leukemia and Allied Diseases."

S. J. Wilson, M.D., Associate Professor of Medicine, University of Kansas School of Medicine, spoke on "Treatment of Leukemia and Allied Diseases."

CARL D. SIEGAL, M.D., Secretary.

#### TENTH COUNCILOR DISTRICT

FRANK W. HALL, CAPE GIRARDEAU, COUNCILOR

St. Francois-Iron-Madison-Washington-Reynolds County Medical Society

The regular monthly meeting of the St. Francois-Iron-Madison-Washington-Reynolds Counties Medical Society was held on May 26 at 8:00 p. m. at State Hospital No. 4, Farmington.

Frank M. McDowell, M.D., St. Louis, gave an illustrated talk on "Cancer of the Face and Mouth," which was followed by a discussion.

Members present were Drs. S. C. Slaughter, M. Grossman, W. H. Barron, Fredericktown; M. T. Haw, Jr., V. W. Taylor, H. M. Roebber, Bonne Terre; C. H. Appleberry, B. H. Taylor, Flat River; D. Appleberry, River Mines; G. L. Watkins, Sr., G. L. Watkins, Jr., and F. R. Crouch, Farmington.

MARVIN T. HAW, JR., M.D., Secretary.

#### COUNTY SOCIETY HONOR ROLL 1949

(Societies which have paid Dues for All Members and date placed on Honor Roll)

Miller County Medical Society, December 8, 1948.

Camden County Medical Society, December 10, 1948.

Benton County Medical Society, December 14, 1948.

Ste. Genevieve County Medical Society, December 16, 1948.

Laclede County Medical Society, December 18, 1948.

Dallas, Hickory, Polk Counties Medical Society, December 23, 1948.

Carter-Shannon County Medical Society, December 30, 1948.

Lewis, Clark, Scotland Counties Medical Society, January 3, 1949.

Audrain County Medical Society, January 5, 1949.

Webster County Medical Society, January 8, 1949.

Harrison County Medical Society, January 10, 1949.

Mississippi County Medical Society, January 12, 1949.

Howard County Medical Society, January 15, 1949.

Henry County Medical Society, January 16, 1949.

Morgan County Medical Society, January 19, 1949.

Callaway County Medical Society, January 21, 1949.

Carroll County Medical Society, January 24, 1949.

Pettis County Medical Society, January 26, 1949.

Holt County Medical Society, January 29, 1949.

Cape Girardeau County Medical Society, February 1, 1949.

Bates County Medical Society, February 8, 1949.

Mercer County Medical Society, February 8, 1949.

Pike County Medical Society, February 9, 1949.

Clinton County Medical Society, February 15, 1949.

St. Francois-Iron-Madison-Washington-Reynolds Counties, February 18, 1949.

Montgomery County Medical Society, February 24, 1949.

South Central Counties Medical Society, February 28, 1949.

Perry County Medical Society, March 10, 1949.

Andrew County Medical Society, March 12, 1949.

Cass County Medical Society, March 15, 1949.

St. Louis County Medical Society, April 27, 1949.

## EDITOR SAYS U. S. MONEY PROPS BRITAIN'S SOCIALIZED MEDICINE

Without Marshall Plan aid, Great Britain would find it difficult or impossible to afford the wholesale benefits of its eleven-month-old National Health Service, William Alan Richardson told The Conference of Presidents and Other Officers of State Medical Associations at its fifth annual meeting at the Traymore Hotel, Atlantic City, on June 5.

Mr. Richardson, editor of *Medical Economics*, has just returned from England, Wales and Scotland, where he directed a month on the spot study of the British experiment in compulsory state medicine.

Some 300 depth interviews were made among a cross-section of the public and the medical profession and among personnel of the Ministry of Health and the various professional associations. Mr. Richardson talked with doctors and patients in every principal city and in as many small towns.

"The National Health Service this year will cost the taxpayers of that country \$1½ billion by government estimate," he said, "or more than 10 per cent of Great Britain's entire national budget. When the experiment is in full operation, it will cost at least \$2½ billion a year, or more than \$55 a head."

"These are only estimates of the operating costs. There are also some items of capital expenditure. They include \$1½ billion for new hospital accommodations and another \$1½ billion for the construction of health centers—plus, of course, the cost of maintaining those facilities after they're completed.

"A member of the House of Commons, in defense of this huge national burden, said, 'What does it matter how much the health service costs if the needs of our people for medical treatment require such an outlay?' To which another member replied, 'What does it matter, indeed? The Americans are paying for it.'

"The cost of the National Health Service was so grossly underestimated by the Ministry of Health that a wave of Parliamentary protest followed. The cost of the ophthalmic service alone was found to have been 650 per cent more than anticipated. The first estimate was \$8 million. The revised estimate was \$52 million.

"Complained one member of the House of Commons: 'If a business firm or a contractor made such a fantastic error in estimating, it would go bankrupt. The estimating here was hopelessly incompetent—unless a lower figure than the true one was deliberately put forward.'

"Under the new scheme, the people of Britain are getting 'quickie' doctor care. Four minutes per office patient is about all the overworked general practitioner can allow. The public is getting more care, but it is poor care.

"In England and Wales today, some 18,000 general practitioners are signed up to take care of 41½ million National Health Service patients. This figures out to an average of 2,300 patients per doctor, or about double the average in the United States. Actually, many general practitioners have lists of 4,000 patients or more. These people are attended by their doctor an average of more than six times a year. Which means that the practitioner with 4,000 patients may find himself responsible for 24,000 visits a year, or eighty visits each working day.

"In a typical case, about twenty of these eighty visits a day will be house calls, made over a period of about seven hours. The remaining sixty visits will be taken care of at the doctor's surgery, or office, in a span of about four hours. Under these circumstances, the gen-

eral practitioner can average only four minutes per office patient (and probably about the same number of minutes per home patient, allowing for travel time). Any disruption of the doctor's schedule—an emergency call, for instance—may cut the average time per patient to less than four minutes.

"To speed up this assembly-line patient care, many waiting rooms are equipped with buzzers. When the buzzer sounds, the patient is supposed to head for the consultation room—on the double.

"I arrived at one office, in Bournemouth, when office hours were supposed to be over. There were still eleven patients waiting. I had visions of being held up and missing my next appointment. But eighteen minutes later all eleven patients were gone. The buzzer had sounded about once every minute and a half.

"A doctor practicing near Cardiff, Wales, said he had once seen 115 patients in a little more than three hours. Another doctor in Glasgow, Scotland, said that during an especially busy period he had seen 194 patients in a single day.

"The general practitioner in Britain today is faced with this paradox: If he has a large list of public patients, he cannot give decent service. If his list is small, he cannot make a decent living.

"Most people do not even get an examination when they visit a general practitioner. A few get a hurried once-over. Scarcely any get a complete examination. If the patient must be examined more fully, the general practitioner usually shunts him to a hospital clinic or outpatient department. If the patient finds this inconvenient, if it means a delay of several days or weeks before he can be taken by the clinic and, if, even after he gets there, he has to queue up for two or three hours—well, that's just too bad.

"Not only are most prescriptions now written by the general practitioner without examining the patient, some are written without his even seeing the patient. In Britain, absent treatment is no longer the exclusive domain of the faith healer.

"The results are grim. Doctors, in many cases, simply are not finding out what is wrong with people. Mrs. Jones can generally be sure of getting a bottle of medicine, but there is no assurance it is the right medicine as long as the diagnosis is inadequate.

"Not only are patients getting treatment they should not have, they are also going without treatment they should have. Thousands of cases of early anemia, tuberculosis and cancer are being missed in the rush.

"The personal, confidential doctor-patient relationship has become a thing of the past. I found evidence of this in the remarks of typical Britishers:

"A widow I talked to in Hereford said, 'The doctor just does not have time to listen to me since he's become so rushed.'

"A tannery employe near Birmingham complained that patients were being 'treated like cattle.'

"A schoolteacher in Surrey said, 'We just do not feel that we have a family doctor any more.'

"Before the National Health Service began, the Minister of Health promised that under the new scheme there would be no disclosure of information given by the patient to the doctor, that the time-honored, confidential relation between them would be respected. This promise has not been kept.

"When a patient changes doctors, for example, his case records are now turned over to the local executive committee. Lay clerks employed by this committee are at liberty to read the full details of the patient's most intimate ailment. It is hardly surprising, then, that some



physicians no longer record such things as venereal disease.

"Socialized medicine is fast destroying the incentive of British doctors. The general practitioner knows that good service is impossible with the heavy patient load he has to carry. So he soon decides not to beat his head against a stone wall. For no matter what kind or amount of medical care he gives, he gets exactly the same annual fee per patient (about \$3.40).

"Even the few general practitioners who are knocking themselves out to give good medical care to large lists of patients will in time wear out either themselves or their ideals. For doctors are people. One cannot overwork them and underpay them indefinitely.

"Some say that if the number of doctors in Britain were doubled it would be then possible to give the people proper medical service. Even if this were so—which I do not admit—it would mean doubling the cost of the doctor-service. And the nation could not possibly afford it.

"Meanwhile, medicine begins to look less and less inviting as a career. A number of medical school administrators say that since the National Health Service began they're getting fewer applications for admission and the persons applying are of noticeably lower calibre than before.

"One faculty member remarked to me: 'What else can you expect? As medicine becomes a less desirable vocation, it will attract less desirable people.'

"This comment points up the most serious threat of all to medical standards—and, hence, to public interest. If the man quoted is correct, Britain's prospects are for fewer doctors, poorer doctors, and a still lower grade of medical care.

"Most Britishers do not recognize the serious basic defects in their new plan of socialized medicine. But that's understandable, because such defects don't manifest themselves in the early stages.

"For this reason, a good many people in Britain now are more or less in favor of the National Health Service. They tend to think it's giving them something for nothing. They don't realize they are paying for it out of their taxes.

"Public attitude toward the new deal in British medical care is explained by another factor: For years, many of Britain's poor got only minimum medical service. Some got virtually no service at all. Any improvement in their lot was, therefore, a welcome one.

"Over here, people enjoy so much better care right now that if they were suddenly to get what the British are getting, they'd look upon it as a cause not for rejoicing but for complaining to high heaven and their Congressmen.

"Sixty per cent of American families enjoy incomes above \$2,000 a year. Eighty-four per cent of British families have incomes of less than \$1,000 a year. It's this acute economic need that prompts the British to clutch at whatever government aid is offered them.

"They've been clutching so hard at the new health service, in fact, that abuses of the system are countless. The tremendous number of trivial ailments for which patients demand attention cuts down the time that can be given to the genuinely sick.

"In Britain's socialized dentistry, there are also some quaint situations. Extractions, for example, pay better than fillings. So a good many Englishmen, whether they need them or not, are getting nice, new, white dentures.

"If the patient is not justified in getting a medicine or appliance he demands, and if the doctor is foolish enough to argue about it, he will most likely end up with one less name on his list—the patient having switched to some less finicky M.D. who has learned that in a social welfare state it does not pay to buck the weight of economic pressure.

"The Minister of Health, a short time ago, broadcast an appeal to hospitals to take whatever corrective steps they could to eliminate the current practice of malingering in hospitals. Civic leaders also are worried about the overuse of the health service and what that overuse is costing. They have suggested that the only way to curb it may be to impose a small charge on the patient before certain services are rendered. This device had to be resorted to in Germany during the operation of the state medical scheme there.

"The National Health Service is, of course, only part of the country's much broader social security system. The latter provides disability benefits, family allowances, unemployment aid, old-age pensions and a host of other things. British doctors, by the way, are to get their pensions at age 65. Their average age at death, I am told, is 52.

"The family doctor does not have to join the National Health Service. But since 93 per cent of the public is signed up to receive the new service, there is little private practice left to support the conscientious objector.

"About 18,000 of Britain's 21,000 general practitioners have been participating in the National Health Service since it started last July. The Minister of Health planned it that way by means of a very neat device: The new law prohibited the doctor his traditional right to sell his practice. But it promised to pay him for his practice, upon retirement or death, if he fulfilled one important requirement: He had to agree to participate in the new scheme on the day it took effect, July 5, 1948.

"It was this one little provision that blackjacked most doctors into the service and that enabled Bevan to get the scheme going. The medical man who had invested ten or twenty thousand dollars in a practice was not anxious to have that investment wiped out for lack of his signature on a government contract.

"The chief advantage of the National Health Service is that treatment can now be given the patient without regard to financial considerations. This is a real boon to those among the poor in Britain who formerly got little treatment or, in some cases, none at all. But the British did not need the all-out plan they now have, just to take care of their medically indigent and near-indigent. A far less inclusive scheme would have served this purpose.

"Britain has neither the facilities nor the money to deliver the 'free-for-all' medical service it promised its people. Nor is such a service called for. Those whose medical care should be subsidized are the needy—not the public at large. Legislation drafted for the benefit of the needy would have filled the real gap that existed, and the government could have afforded the cost."

**MISSOURI STATE MEDICAL ASSOCIATION**Ninety-First Annual Session  
Kansas City

March 27, 28, 29, 30, 1949

**MINUTES OF THE HOUSE OF DELEGATES**

Little Theatre, Municipal Auditorium

Sunday Session

The first meeting of the House of Delegates of the Ninety-first Annual Session of the Missouri State Medical Association was called to order at 2:00 p. m., March 27, in the Little Theatre, Municipal Auditorium, Kansas City, with Ralph E. Duncan, M.D., Kansas City, Speaker, presiding.

Officers, Councilors and Delegates present during the Annual Session follow:

**Officers**

President.....Robert Mueller, St. Louis  
President-Elect.....Wallis Smith, Springfield  
Secretary.....W. A. Bloom, Fayette  
Vice President.....P. W. Jennings, Canton  
Vice President.....B. E. DeTar, Joplin

**Councilors**

1st District.....H. E. Petersen, St. Joseph  
2nd District.....W. F. Francka, Hannibal  
3rd District.....J. W. Thompson, St. Louis  
4th District.....Otto W. Koch, Clayton  
5th District.....J. F. Jolley, Mexico  
6th District.....R. W. Kennedy, Marshall  
7th District.....C. Edgar Virden, Kansas City  
8th District.....W. S. Sewell, Springfield  
9th District.....E. C. Bohrer, West Plains  
10th District.....Frank W. Hall, Cape Girardeau

**Delegates****First District**

Buchanan.....W. Roger Moore, St. Joseph  
Buchanan.....L. Paul Forgrave, St. Joseph  
Caldwell-Livingston....Donald M. Dowell, Chillicothe  
Carroll.....Carl H. Reed, Carrollton  
Clay.....A. E. Spelman, Smithville  
Grundy-Daviess.....E. J. Mairs, Trenton  
Harrison.....W. A. Broyles, Bethany  
Mercer.....George B. Bristow, Princeton  
Nodaway-Atchison-Gen-  
try-Worth.....George R. Wempe, Tarkio  
Nodaway-Atchison-Gen-  
try-Worth.....Frank B. Matteson, Grant City  
Nodaway-Atchison-Gen-  
try-Worth.....Henry C. Bauman, Maryville

**Second District**

North Central—  
Adair.....J. S. Gashwiler, Novinger  
Sullivan.....J. S. Montgomery, Milan  
Chariton-Macon-Mon-  
roe-Randolph.....G. W. Hawkins, Salisbury  
Chariton-Macon-Mon-  
roe-Randolph.....D. E. Eggleston, Macon  
Chariton-Macon-Mon-  
roe-Randolph.....T. S. Fleming, Moberly  
Lewis-Clark-Scotland...J. R. Bridges, Kahoka  
Lewis-Clark-Scotland...P. W. Jennings, Canton  
Linn.....John R. Dixon, Brookfield  
Marion-Ralls.....B. L. Murphy, Hannibal

**Third District**

St. Louis City.....Emil A. Burst, St. Louis  
St. Louis City.....Harry R. Echterhoff, St. Louis  
St. Louis City.....Edwin C. Ernst, St. Louis  
St. Louis City.....Armand D. Fries, St. Louis  
St. Louis City.....S. Albert Hanser, St. Louis  
St. Louis City.....Andrew C. Henske, St. Louis

St. Louis City.....Louis H. Kohler, St. Louis  
St. Louis City.....William B. Kountz, St. Louis  
St. Louis City.....Robert C. McElvain, St. Louis  
St. Louis City.....Charles E. Martin, St. Louis  
St. Louis City.....Mary E. Morris, St. Louis  
St. Louis City.....James A. O'Dowd, St. Louis  
St. Louis City.....John F. Patton, St. Louis  
St. Louis City.....F. G. Pernoud, St. Louis  
St. Louis City.....Alphonse J. Raemdonck,  
St. Louis  
St. Louis City.....Raoul L. Ramos, St. Louis  
St. Louis City.....Llewellyn Sale, St. Louis  
St. Louis City.....Victor E. Scherman, St. Louis  
St. Louis City.....Robert E. Schlueter, St. Louis  
St. Louis City.....Cyril W. Schumacher, St. Louis  
St. Louis City.....Wendell G. Scott, St. Louis  
St. Louis City.....Bernard L. Sinner, St. Louis  
St. Louis City.....J. W. Thompson, St. Louis  
St. Louis City.....Carl F. Vohs, St. Louis  
St. Louis City.....Joseph E. VonKaenel, St. Louis  
St. Louis City.....O. B. Zeinert, St. Louis

**Fourth District**

Franklin.....Herbert H. Schmidt,  
Marthasville  
Jefferson.....Harry Yoskit, Festus  
St. Charles.....Landon R. McIntire,  
St. Charles  
St. Louis County.....E. R. Brown, University City  
St. Louis County.....Robert B. Denny,  
University City  
St. Louis County.....C. P. Dyer, St. Louis  
St. Louis County.....John O'Connell, Overland  
St. Louis County.....Roy Walther, Sr., Overland  
St. Louis County.....Paul Whitener, St. Louis

**Fifth District**

Boone.....A. R. McComas, Sturgeon  
Callaway.....W. J. Cremer, Fulton  
Cole.....E. D. Sugarbaker,  
Jefferson City  
Cooper.....Byron M. Stuart, Boonville  
Howard.....W. J. Shaw, Fayette  
Miller.....W. L. Allee, Eldon  
Moniteau.....E. A. Kibbe, California  
Morgan.....J. L. Washburn, Versailles

**Sixth District**

Bates.....John M. Cooper, Butler  
Benton.....David H. Glenn, Warsaw  
Cass.....David S. Long, Harrisonville  
Henry.....R. S. Hollingsworth, Clinton  
Johnson.....T. Reed Maxson, Warrensburg  
Lafayette.....W. E. Koppenbrink,  
Higginsville  
Pettis.....P. V. Siegel, Smithton  
Saline.....R. C. Haynes, Marshall  
Vernon-Cedar.....C. Braxton Davis, Nevada

**Seventh District**

Jackson.....A. N. Altringer, Kansas City  
Jackson.....Alvin J. Baer, Kansas City  
Jackson.....Victor Buhler, Kansas City  
Jackson.....Kenneth E. Cox, Kansas City  
Jackson.....Ralph E. Duncan, Kansas City  
Jackson.....Hugh L. Dwyer, Kansas City  
Jackson.....William W. Gist, Kansas City  
Jackson.....John S. Knight, Kansas City  
Jackson.....H. L. Mantz, Kansas City  
Jackson.....F. Garrett Pipkin, Kansas City  
Jackson.....Richard L. Sutton, Kansas City  
Jackson.....Vincent T. Williams,  
Kansas City  
Jackson.....A. Melvin Ziegler, Kansas City



### Eighth District

Barton-Dade.....	Herbert M. Arnold, Lamar
Barton-Dade.....	Alvin R. Cain, Greenfield
Dallas-Hickory-Polk....	G. C. Plummer, Buffalo
Greene.....	Durward G. Hall, Springfield
Greene.....	F. T. H'Doubler, Springfield
Greene.....	A. Denton Vail, Springfield
Jasper.....	B. E. DeTar, Joplin
Jasper.....	S. W. Scorse, Joplin
Newton.....	F. F. Whitehead, Neosho
Ozarks—	
Barry.....	F. T. Kerr, Monett
Lawrence.....	A. J. C. McCallum, Aurora
Stone.....	Fred L. Wommack, Crane
Taney.....	J. M. Threadgill, Forsyth
Webster.....	C. R. Macdonnell, Marshfield

### Ninth District

Carter-Shannon.....	T. W. Cotton, Van Buren
Laclede.....	R. E. Harrell, Lebanon
Phelps-Crawford-Dent-	
Pulaski.....	R. E. Breuer, Newburg
South Central—	
Howell.....	C. F. Callihan, West Plains
Oregon.....	C. W. Cooper, Thayer
Texas.....	Garrett Hogg, Jr., Cabool
Wright.....	R. A. Ryan, Mountain Grove

### Tenth District

Cape Girardeau.....	A. M. Estes, Jackson
Dunklin.....	Paul Baldwin, Kennett
New Madrid.....	John J. Killion, Portageville
Pemiscot.....	John H. Roberson, Hayti
St. Francois-Iron-Madi-	
son-Washington-	
Reynolds.....	Harry M. Roebber, Bone Terre
St. Francois-Iron-Madi-	
son-Washington-	
Reynolds.....	Ben Bull, Ironton
St. Francois-Iron-Madi-	
son-Washington-	
Reynolds.....	W. Harry Barron, Fredericktown
Scott.....	W. O. Finney, Chaffee

**SPEAKER:** Members of the House of Delegates, Ladies and Gentlemen, will you please come to order, and will you stand while the Reverend Warren Grafton, Pastor of the Country Club Christian Church, Kansas City, delivers the invocation?

**REVEREND GRAFTON:** Eternal God, Our Father, Who ever willeth that all Thy children be made whole, we bear up to Thee in prayer, these whose lives are dedicated to the health of the community. We thank Thee for those, who in laboratory, in hospital room and by bedside, are working modern miracles of healing in medicine and surgery and are dedicated to their task. We pray that as they heal and mend bodies, so also their personalities may prove influences that shall build for sound thinking and sound living. May Thy blessing be upon this group in these days of deliberation together, and may that blessing attend them as they return to their communities and carry on their ministering, healing the sick of humanity. For this we ask, in the name of the Great Physician, Amen.

**SPEAKER:** Thank you, Doctor Grafton. It is now my pleasure to introduce to you the Honorable Mayor of Kansas City, William E. Kemp, who has for many years cooperated with Jackson County Medical Society and the committees of the Missouri State Medical Association, to help keep scientific medicine on a high plane, serving not only this community, but the entire state. Mayor Kemp.

**MAYOR KEMP:** Mr. Chairman and distinguished guests, that introduction came from my neighbor. He always has to say a nice thing about me, or I might not feed his dog. This is one of the pleasures I have in being Mayor. I get to meet all the distinguished people

who come to town and, if it were not for the honor of the thing, I would rather just go ahead and tend to my own knittin' as a lawyer here in the city. I am reminded of the story—speaking of the honor of the thing—of the man who had offended the citizens of a community and they had ridden him out of town on a rail, and somebody asked him what he thought about that. "Well," he said, "I'll tell you. If it wasn't for the honor of the thing, I would really rather walk." Sometimes I feel the same way about it.

Ladies and gentlemen, I cannot tell you the high regard I have for your profession; it is really a learned profession, a profession that is dedicated to the healing of the ills of humanity, and I think I have a broad acquaintance with the doctors of this community and, indeed, of a number of other communities in this state. By and large, I have found them to be men of the highest character, and I feel they are devoted to the enterprise in which they are engaged, the enterprise of healing human beings.

And so, it is with genuineness that I welcome you to Kansas City for your annual deliberations for the 91st time, as I understand it, in the history of your organization. That is a long, long span in this new country of our, for any organization to exist, and I am sure that it has grown and is continuing to grow in power and influence in the community. I want to say in that connection. I certainly appreciate the interest of the doctors, not only of this community, but throughout the state, in what I believe would be a great forward step in the advancement of the medical profession, and that is to bring the Medical School of the University of Missouri to Kansas City, not from any selfish motives on my own part or the other citizens of Kansas City, but because I am thoroughly convinced that you cannot have a great medical school except in a large center of population, where there are hospitals, where there are a lot of sick people, and I still entertain the high hope that that may come about, although there are powerful influences at the University which seem to be opposed to it. At one time, it seemed just the contrary—that they were interested in coming here. I still hope that can come about and, I feel that if it does come about, it will go a long way toward futhering a part of your six point program in educating more men for the medical profession and getting them back into the rural areas of Missouri where they are so desperately needed.

I feel the enterprise that you are engaged upon now in this program of yours will do a great deal toward letting the people feel that you as an Association are interested, not only in your selfish achievement, in your particular town, but also interested in medicine generally, throughout the State of Missouri, and you are interested in seeing that the people in the rural areas have an opportunity for adequate medical care and attention.

So it is with that background that I again say to you that I welcome you to Kansas City, and join the Minister in the benediction upon your consultations here together for a better and finer medical society.

**SPEAKER:** Mr. Kemp, the applause you have just heard emphasizes the pleasure of the members of the Association in having you here to open our 91st Session, but also this is our 99th year as an organization to promote the public health, better the medical profession and promote the science and the art of medicine. Thank you, Mr. Mayor.

In order that the work of this House may be dispatched with efficiency, it is requested that only members who are serving as Delegates or Officers or are reporting for committees occupy seats in the voting areas, which are in the front of this hall. The different numbers designate the Councilor Districts. Officers and guests will sit on the left and committee members will sit on the right. Will the Delegates, Officers and Committee members please find seats in the areas

designated for them? The rest of the members sit in any area that you like, in the back, on the right or on the left.

Will the Chairman of the Committee on Credentials, Dr. Allee, please make his report? Dr. Allee.

LOGAN W. ALLEE, M.D., Eldon: Mr. Speaker, the Committee on Credentials, Dr. Scherman, Dr. Hoffman and myself, reports sixty-nine Delegates registered.

SPEAKER: The Chairman of the Committee on Credentials reports that sixty-nine Delegates are registered, and if the Speaker hears no objection, the House of Delegates for the 91st Annual Session of the Missouri State Medical Association is declared duly constituted. The first order of business of the House is the report of Local Committee on Arrangements.

#### REPORT OF THE LOCAL COMMITTEE ON ARRANGEMENTS

VICTOR B. BUHLER, M.D., Kansas City: The local committee wishes to welcome all the members and Delegates of the Missouri State Medical Association to Kansas City. We feel that all the arrangements have been made. We have worked quite closely with the Executive Secretary and I think that all necessary arrangements for a successful meeting have been consummated. I would like to call your attention to three activities of our local committee. One is our publicity. We have five radio broadcasts from various guest speakers, and also a presidential address by Dr. Smith. In addition to this we have arranged for a Tuesday night party. Admission will be by badge and tickets will be issued at the door. The party will start at 6:00 p. m. with a cocktail hour, which will be followed at 8:00 o'clock by a dinner, and at 9:00 o'clock by a floor show. I would like also to call your attention to the fact that there is a press room at the President Hotel. It has as yet not been assigned and will not be assigned until the check-out hour. If any of you are interested in going to the press room, it will be listed under Dr. John Growdon's name.

SPEAKER: The next order of business is the reading of the minutes of the previous meeting. The minutes were published in the July 1948 issue of THE JOURNAL of the Missouri State Medical Association. If there are no objections or corrections, the minutes as printed in the July 1948 issue of THE JOURNAL will stand approved as printed. Hearing no objection, the minutes stand approved. The next order of business calls for the instructions of the Speaker of the House of Delegates. Doctor H'Doubler, will you please take the Chair?

#### Speaker's Instructions:

Isaiah of old said, "The Lord hath given me the tongue of the learned, that I should know how to speak a word in season, to him that is weary."

Mr. Vice Speaker, Members of the House of Delegates and Guests, last year, as the Speaker for the 90th Annual Session of the House of Delegates, I suggested that each Delegate become well informed upon the Association's objectives and the plans that would be made during that session to advance those objectives. Further, that he take the "word" back to each of the individual members of his county society.

The Reports of the Officers and Standing Committees reflect progress and, therefore, the Delegates must have carried the "word."

In this fast changing world, the medical man, as represented in this Association, finds himself confronted today with problems that he and his patient must solve in the coming months, if they are both to have and to hold the benefits of scientific medicine.

There has been a tendency in our Association for the majority of the members to let a few carry on the work that must be done and, in recent years, the few have shown a tendency to delegate much of the Association's work to nonmedical persons.

I believe it is unhealthy and unsafe to trust too many

nonmedical participants with educational work that we ourselves can do best.

The inventor, the man closest to a device, too often must be content with the satisfaction of creation. The fellow who makes the device work, who promotes it, is the one to whom the public gives the symbolic palm and its tangible rewards.

Parents too often turn their children over to the teacher, the Sunday School and, in some cases to the court, and feel that their duty is done.

Lay helpers can be hired, but you are the one to decide what your brain children need, especially what their weaknesses are. This is no time to be complacent. There was never a finer time for medical men to come to the aid of their patients, and honest medicine, than now. They can do this only if they act with knowledge and with spirit, both individually and collectively.

In these days, the words "private enterprise" rings in our ears. I would go further. It would be better if we more often thought and acted as if it were a matter of personal enterprise.

It seems to me that Doctors of Medicine must enter more as individuals into the decisions that are being made. We must thoroughly acquaint ourselves with what those decisions are, then tread every step of the way personally to carry them out.

"Pocket-book members" lend aid; they are important, but the essential member is the one who throws his own brain cells into the work, and stretches his own muscles to meet those whose opinions are to be formed, and formed in accordance with the facts.

You cannot fulfill your obligations to yourself, to your society or to your country simply by paying your dues and assessments.

The people of Missouri have never failed to express confidence in the doctors who practice in their state, and today they are depending on their doctors, members of this Association, to provide honest medicine for all, and to inform them about the historically universal failings of politically controlled medicine; medical care from which care is lacking.

No group of people and no profession are in a better position to meet and know the people of Missouri than the Doctors of Medicine. We have within our membership 3,478 physicians; each day no less than ten contacts by each are made with persons who are ill; 12,694,700 contacts in a year. These contacts should prove to be to the benefit of all concerned.

It has been said that the physician is sometimes apt to forget that he too is a laborer. The earning of the physician comes directly from the skill of his hand which is guided by a highly trained technical mind. We are laborers and our patients labor.

The influence of a physician can be felt and measured by his influence with his patients. If the patient is treated as a fellow-laborer and neighbor, we can, and will, have his influence for scientific medicine distributed through personal enterprise. If you are a member who wants to serve your fellow man to the best of your ability, you will not only continue to work personally within the structure of your Association, but you will stimulate and interest the relatively inactive members to work with you; you will discourage members from working around the basic policy of our Association. Let us have personal responsibility for a unity that operates to a single end. "For if the trumpet give an uncertain sound, who shall prepare himself to the battle?"

Yes, we can well afford to adopt and live the motto of our state: "United we stand, divided we fall."

During the last year we have lost seventy-eight members through death. Each and every one of these members served his fellow man well. Mr. Vice Speaker, may we have at this time the members all stand for a moment of silent tribute to the memory of those who have died during the last year?

VICE SPEAKER: Will you all please stand?  
(Moment of silence.)



**SPEAKER:** Your Speaker believes it is necessary to create three additional reference committees for this session, namely:

1. Committee on Scientific Exhibits.
2. Committee on Technical Exhibits.
3. Committee on Reports of Officers, Council and Standing Committees.

Mr. Chairman, will you entertain a motion that the Speaker be given permission to appoint the three special reference committees, as requested?

Upon motion being passed that the additional committees should be appointed, the following Reference Committees were appointed:

#### **Reference Committee on Constitution and By-Laws**

Herbert L. Mantz, Kansas City, Chairman.  
W. J. Shaw, Fayette.

#### **Reference Committee on Resolutions**

Durwald G. Hall, Springfield, Chairman.  
William B. Kountz, St. Louis.  
T. S. Fleming, Moberly.

#### **Reference Committee on Miscellaneous Affairs**

C. Braxton Davis, Nevada, Chairman.  
J. L. Washburn, Versailles.  
P. W. Jennings, Canton.

#### **Reference Committee on Medical Education and Public Welfare**

John S. Knight, Kansas City, Chairman.  
Paul Baldwin, Kennett.  
Joseph Conrad, Chillicothe.

#### **Reference Committee on Reports of Officers, Council and Standing Committees**

Robert E. Schlueter, St. Louis, Chairman.  
R. C. Haynes, Marshall.  
B. E. DeTar, Joplin.

#### **Reference Committee on Scientific Exhibits**

J. S. Gashwiler, Novinger, Chairman.  
R. E. Breuer, Newburg.  
Byron M. Stuart, Boonville.

#### **Reference Committee on Technical Exhibits**

J. M. Threadgill, Forsyth, Chairman.  
D. E. Eggleston, Macon.  
W. Harry Barron, Fredericktown.

Upon motion of the Speaker, the Vice Speaker presiding, it was voted that an installation and oath of office be included in the procedure.

The Speaker gave the following procedure for the House of Delegates.

#### **Procedure For the House of Delegates**

In order to expedite the session of this House of Delegates your Speaker wishes to use the following procedure, which is in accordance with Robert's Rules of Order, Revised, and will do so unless objection is made at the conclusion of their presentation.

1. Each Councilor is requested to sit with the Delegates of his district during each session of the House and perform the following duties: Check the list of Delegates of his district who have been certified by the Committee on Credentials whenever a roll call is requested by the Speaker, and be prepared to report as to their presence or absence. The Secretary of the House will furnish each Councilor with a certified list of his delegates. Be available to assist the Speaker in carrying out the procedures necessary to conduct the business coming before the House.

2. All reports of Officers, the Council and Standing and Special Committees of the Association which have

been printed, will not be read, but will be received and referred to the Reference Committee on Reports of Officers, Council and Standing Committees. If the sponsor of any of the printed reports desires to omit or add to the printed report, he will be given the opportunity to do so at the time his report is called. All reports that have not been printed will be read by the sponsor, received and referred to the Reference Committee on Reports of Officers, Council and Standing Committees.

Any Officer, Delegate or member properly recognized may at the time a report is received, ask questions in reference to the report, if he so desires, and again later he may meet with the Reference Committee on Reports of Officers, Council and Standing Committees to obtain further clarification.

If the sponsor of a report has not reduced his recommendations to a resolution, the members of the reference committee will see that the necessary resolution is prepared and introduced when new business is under consideration.

All resolutions, amendments or substitute resolutions must be clear as to intent and methods suggested or outlined as to when and how their objectives are to be accomplished. Resolutions may be discussed at the time of introduction and prior to referral to reference committees, if such discussion may seem feasible to save time at the Recessed Session on Monday afternoon, when the reference committees will report to the House. Time and place of meetings of the reference committees will be posted on the bulletin board which is near the registration desk, and interested members are urged to attend their meetings and enter into a full discussion of the subjects under consideration. No member of this House shall speak more than one time in discussion of any motion or resolution until other members who desire to discuss the matter have an opportunity to do so. All members who discuss motions and resolutions are to organize their remarks before speaking, so that they may be brief and yet informative.

#### **PRESIDENT'S MESSAGE AND RECOMMENDATIONS**

Mr. Chairman, Members of the House of Delegates, there is no message to read. I have a few remarks to make. I have always thought that the Past President's message was a lot of words. It is not what the past year has done; it is what we are going to do in the future.

I thought I might make a few remarks about some of the things that have happened, however, and the impressions they may have made.

In the first place, quite a few of you, I presume, know that the last year has seen the election of a new President of the United States, also quite a little furor relative to medical economics.

I am going to take any blame or whatever it might be that has accrued from the past election relative to the efforts of the Missouri State Medical Association. It seems to me that it was the obligation of the Missouri State Medical Association to place before the members our opinions relative to the issues in the election. It was a question of issues and not personalities or political parties, I felt, since one political party had as one of its main issues the socialization of the profession, and the other political party, or its main candidate, had as one of the issues as little socialization of medicine as possible, it seemed to me to be proper that the issues at stake be considered, so that in the future, the profession would not come to me and say, "Well, what did you do, to prevent this that is apparently a catastrophe to the profession, if carried to its ultimate end?"

So with the unanimous consent of the Council, I went to the different areas throughout the state and gave at least the impressions relative to the election. As you know, it was of no avail, and the gentleman was elected, the party was elected, who we thought

at least, would try to put through a socialized medicine program.

I think our worst fears have been realized. I do not think it is anybody's business how a man votes, whom he happens to be for, but in this particular election, it was a question of voting for the issue of the socialization of the profession or the nonsocialization, and many of us thought that it was up to us to try to prevent the rapid socialization. Many men who voted for Mr. Truman told me that they would see to it that their party was big enough to prevent the socialization or at least do what they possibly could to prevent it. You might say to some of these men now, that "Now is the time for all good men to come to the aid of the profession," and I am sure that if you have any influence in Washington, you should exert it now, because if you do not do it now, the issue, I am afraid, is going to get out of hand.

I think all doctors at the present time should contact their Congressmen and explain to them just what it will mean to the people to have complete socialization. That is another controversial point even amongst the profession.

You probably know that we have the committee of 168, most of whom are full time professors of medicine, who have come out against the \$25.00 assessment. Many of you would probably like to know that approximately 60 per cent of the physicians of Missouri have paid their assessment. There are some Honor members and also some Junior members who do not feel they can afford to pay the assessment at this time; I am taking that into consideration in making the 60 per cent estimate. I think that is a splendid showing when one realizes that we have only sent out one letter, and there has been no compulsion of any kind exerted relative to the payment of this assessment. No matter what you may read to the contrary in the newspapers or over the radio, we have exerted no compulsion of any sort. I am quite certain that when many of the men know what this is all about they too will pay their \$25.00 assessment.

You have read much in the public press about this assessment. One objects to hearing some doctor talk about this terrible \$25.00. I was talking to a Union man some time ago; he is in the printer's union which is on strike at the present time. I think he is a linotyper. He showed me what he was paying per month out of his salary; it was \$27.00 per month, that they were taking out of his salary to pay for these men who were striking throughout the country, and he has been paying that for some time. I saw his receipts, so I know he was telling me the truth. Yet doctors will complain about paying the \$25.00 assessment, and they will permit lies to be told about the profession.

The \$25.00 assessment is to be used for two purposes, as I understand it. One is to educate the people relative to medicine as practiced in the United States of America. I think the people should know that, and I do not see why anyone should object to paying money for the development of that purpose. The second is for the development of plans to spread medical care among the people; I do not see how anyone can object to that. I told Dr. Fishbein, when he was in St. Louis, that if this money was spent for any other purpose, the medical profession of the State of Missouri would object to it, particularly relative to lobbying. Dr. Fishbein tells me that there are no lobbyists in Washington for the American Medical Association. It is true that we have Dr. Lawrence's office in Washington, but that is for educational purposes and purposes of information. I can see no objection to that, and I do not think any doctors can object, but I think it is one of the jobs of the House of Delegates to talk to their respective members and to urge them to pay this \$25.00. It is not alone for the benefit of the profession, but for the people. We are fighting a vicious circle. I have given any number of talks on

socialized medicine, and that is what it is. You will hear them say that this is not socialized medicine; that compulsory prepayment insurance is not socialized medicine. Well, it is, and it always has resulted in complete socialization of the profession, in every country in which it has been introduced. It was introduced in England in 1912 as compulsory health insurance, and in 1948 it became complete socialization of the profession.

We must fight certain elements in our profession, as well as those people who would foist socialized medicine on us, some people who actually believe that it is good. There are other people, however, who are in it purely for political purposes and nothing else. You would be surprised how many do-gooders there are in this country who actually believe that socialization of the profession would give people better medical care, in spite of the fact that history of all other such systems proves that it will be just the opposite. It will lower the quality of medical care, demoralize the profession.

I want to say a word of the work of the state office. Many men high in the A.M.A. will tell you that the Missouri state office and the work of that organization is one of the finest in the country. I don't think that too much credit can be given to the state office, Tom O'Brien, Ray McIntyre, Helen Penn and all the girls in the office, for the splendid work they have done. You have a great organization.

I have been around the state this year with Ray McIntyre and Tom O'Brien. Half the time they have spent away from home, traveling the road, and you know what splendid organization you have had in your county societies.

Missouri State Medical Association has introduced two things to medicine in the United States. First, is the Field Secretary, who has organized our county societies so splendidly, and this I understand is being copied all over the country. Second, is our program on rural medicine, whereby, by giving talks to our interns and residents of our two great cities, Kansas City and St. Louis, having panels of doctors who practice rural medicine, to tell these young residents and interns just what rural medicine is about. This is a definite and practical approach to the subject. We are doing something; we are not talking about it. As I say, I think the people in the state office are to be complemented, that we have a positive program.

The Missouri State Medical Association has done much for the futherance of the four year medical school. We cannot say too much about it at this time, but we are reporting progress and definite progress.

I think that we must all get behind our program. We cannot be talking anymore; we must be doing things. If we talk much longer, certain things are going to be done in Washington, when the time for talking will be over. We must contact our representatives, contact the representatives and the senators. We must do it now. We must have a positive program. We cannot say, "Let the other fellow do it," because each and every one has a personal interest in it; we have a personal financial interest in it, and we have a personal interest relative to the general public.

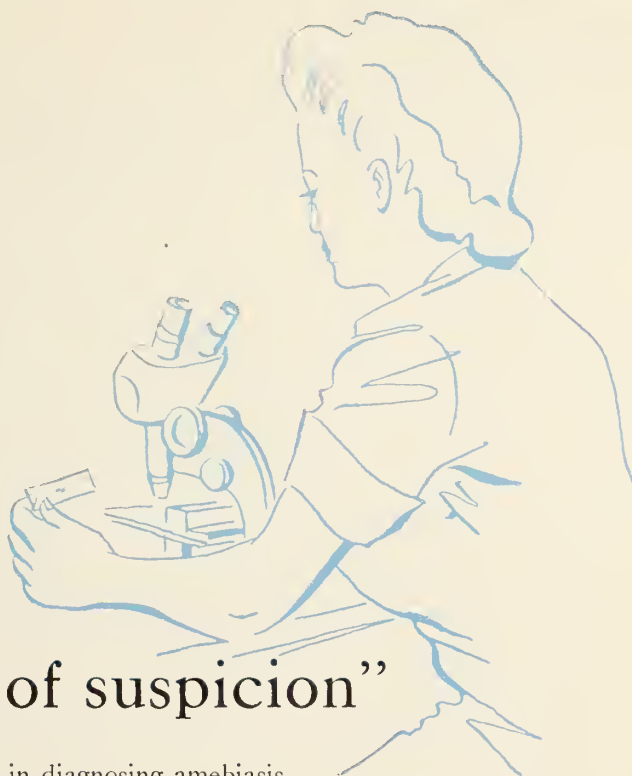
It has been a distinct pleasure to have served the association and I want to thank you again for the many pleasant hours I have spent during the last year, particularly in visiting the different county societies, and in having met so many pleasant men in this grand profession of medicine.

The President-Elect, Wallis Smith, M.D., Springfield, gave the recommendations of the President-Elect.

#### Recommendations of the President-Elect

I wish to thank you for the honor that will be bestowed upon me at the Wednesday session of the House, when I will be installed as President of the Association. I appreciate the opportunity of speaking to you now and





## “A high index of suspicion”

The difficulties and pitfalls in diagnosing amebiasis are stressed frequently in medical literature.

“... despite the absence of a history of dysentery, amebiasis must be considered in the differential diagnosis of many bizarre clinical syndromes. . . . A high index of suspicion is the keynote of early diagnosis.”<sup>1</sup>

In acute or latent forms of amebiasis, Diodoquin may be employed over prolonged periods. This high-iodine-containing amebicide “is well tolerated. . . . The great advantage of this simple treatment is that in the vast majority, it destroys the cysts of *E. histolytica* and is, therefore, especially valuable in sterilizing ‘cyst-carriers.’ It can readily be taken by ambulant patients and, therefore, eliminates the necessity of hospitalization.”<sup>2</sup>

# Diodoquin<sup>®</sup>

(5,7-diiodo-8-hydroxyquinoline)



---

**SEARLE**  
RESEARCH IN THE SERVICE OF MEDICINE  
*G. D. Searle & Co., Chicago 80, Illinois*

1. Warshawsky, H.; Nolan, D. E., and Abramson, W.: Hepatic Complications of Amebiasis, *New England J. Med.* 235:678 (Nov. 7) 1946.
2. Manson-Bahr, P.: Some Tropical Diseases in General Practice: “A Post-War Legacy,” *Glasgow M. J.* 27:123 (May) 1946.

# MEAT...

## And This Protein Era

"Today we are in the protein era."\* This terse but meaningful statement, made by an outstanding authority in a recent review on the progress of nutrition, reflects an accomplishment of utmost significance.

This résumé of modern nutrition concepts shows convincingly that the recognition of the vital role of protein in health and disease ranks among the great advances of medicine.

The therapeutic use of a high protein dietary has revolutionized the prognostic outlook in many hepatic diseases formerly considered resistant to treatment.

The use of high protein dietaries has resulted in a gratifying reduction of surgical morbidity and mortality, made possible by systematic presurgical nutritional build-up of the patient. Through this same approach, wound healing and general recovery are greatly promoted.

In nephritis and nephrosis, at one time considered absolute contraindications for animal protein in the dietary, the use of protein in liberal amounts can significantly reduce mortality and decidedly improve the clinical condition.

The benefits derived from high-protein nutrition in pregnancy and lactation are diversified and far-reaching, embracing both mother and offspring. For this reason, a generous extra serving of meat, given daily as a routine measure, has been strongly recommended as a means of improving the health of mother and child.

Meat is rightfully regarded as an outstanding protein source. It is notably rich in protein. The protein of meat is biologically complete, capable of satisfying all protein needs of the body from childhood to old age. And, particularly important in disease, the excellent digestibility of meat gives virtual assurance that its protein and other valuable nutrients become available for utilization.

\*McLester, J. S.: Protein Comes Into Its Own, J.A.M.A. 139:897 (April 2) 1949.

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.



**American Meat Institute**  
Main Office, Chicago...Members Throughout the United States



discussing with you some of the things I hope may be part of our work during the coming year.

Probably the thing foremost in all of our minds is compulsory health insurance, and I believe it appropriate that this House of Delegates pass a resolution against compulsory health insurance. I have prepared the following resolution:

"WHEREAS, The United States has the highest standards of health, of medical care and of scientific medical facilities of any country in the world, as a result of our system of free enterprise; and

"WHEREAS, Compulsory health insurance, wherever tried, has caused a decline in national health and deterioration of medical standards and facilities; and

"WHEREAS, Wherever the government has assumed control of medical services, the result has been tremendous multiplication of costs over original estimates, extreme tax burden and national deficits, and gradual extension of socialization of other activities of national life; therefore, be it

"Resolved, That the Missouri State Medical Association does hereby go on record against any form of compulsory health insurance or any system of political medicine designed for national bureaucratic control; and be it further

"Resolved, That a copy of this resolution be forwarded to the President of the United States, to each Senator and Representative from the State of Missouri, and that the Senators and Representatives be, and are, hereby respectfully requested to use every effort at their command to prevent the enactment of such legislation."

I ask that this resolution be adopted; but adopting resolutions is not going to keep us from compulsory health insurance. I believe our best answer, not only for the profession, but for the public, lies in our nonprofit prepayment plans, Blue Cross Hospitalization, Missouri Medical Service and Surgical-Medical Care, Inc.

The Boards of Trustees of these plans have been requested by the Council of the Missouri State Medical Association to correlate their activities in order that they may achieve a greater enrollment of people and extend the benefits of these programs to more people in the State of Missouri. The plans are directed by their Boards of Trustees, but their approval by accrediting organizations is contingent upon the approval that is given the plans by the local medical society or State Medical Association. I think that it is appropriate for us to call to their attention the report of the Special Committee of the Council and request that it be given immediate attention.

Believing that cooperation, or continued cooperation, as the case may be, with persons and bodies that have the health of the people as a responsibility, is extremely important, I would ask that this House of Delegates commend the Council for its cooperation with such groups and direct the Council to continue such cooperation. I have in mind such things as the appointment of a committee at the request of the Governor to study the mental institutions in the state, which was done, and the committee has acted. Also, the initiative which the Association took through direction of the Council in sponsoring the State Health Council. The Council should be encouraged to continue activities such as this.

The meetings and work with the Board of Curators of the University of Missouri in an attempt to establish a good four-year medical school in connection with the University has not progressed as far as we could wish, but I recommend that the Council be instructed to carry this work on during the time the House of Delegates is not in session, in order that this objective, which is one of the points of the Six Point Program of our Association, may be expedited and achieved.

At the last meeting of the Council it was decided that personnel should be employed to make an objective study of the relative cost of construction and maintenance of a four year medical school at each of the suggested locations. This study has been under way and I am informed it is now completed.

It is my recommendation that the Council be instructed to place the results of this survey in the hands of those most interested in the problem so that this material may be used in securing the four year medical school for the State of Missouri.

I, personally, am vitally interested in the outcome of

the negotiations and, in my opinion, the facts gathered as the result of this survey should govern the road we are to follow in all future deliberations with the Board of Curators.

We need more doctors in rural Missouri. I do not believe we need the number that some estimates give, but we do need more. We are challenged by the accomplishments recently achieved in the State of Kansas through the efforts of the rural farm organizations in support of the program developed for the University of Kansas School of Medicine. The program has been financed by an astonishing appropriation of \$4,000,000.00 by the state legislature and has the support of business leaders in many communities who are authorizing the cost of locating young physicians in their communities. The recognition of this program of our sister state is not local recognition, but it has achieved national attention. The Dean of the School of Medicine has been an invited speaker at many recent meetings of national importance, particularly the first annual meeting of the American Academy of General Practice, recently held in Cincinnati.

The Committee on Rural Medical Service has done a splendid job and has played a large part in the placing of approximately 300 young doctors in rural Missouri. This is by far not the only work this committee has done, but it is important from the standpoint of the public. However, being a member of the committee, I know that work has been done by two or three members and the Field Secretary. Therefore, I recommend that this committee be made a standing committee, coming under the By-Law that specifies a five member committee. The necessary resolution to accomplish this change in By-Laws has been prepared and I have been assured that it will be presented to this House for action. I am confident that your Committee on Rural Medical Service is informed on the Kansas plan and will consider the principles of the program in their recommendations toward achieving a solution of the problem of placing Doctors of Medicine in rural Missouri.

It has been demonstrated, time after time, that most young physicians of today seek locations where hospital and diagnostic facilities are readily available. In facing this fact squarely, we know the necessity of individual physicians, as well as groups, placing their efforts behind the securing of more hospitals and diagnostic centers in rural Missouri.

A survey of existing hospital and public health facilities was made in this state during the period January 15, 1947, to December 1, 1947, by the Missouri Division of Health, and its Advisory Council, under terms of the Federal Hill-Burton Bill, or Hospital Construction Act, now Public Law 725, and the Missouri law which implements the Federal Act in this state. On the basis of this survey a state plan for hospital construction, based upon shown needs, was developed. Certain rules and regulations were set up to govern the construction of hospitals which were to apply for and receive federal funds for one third of the cost. To date construction has actually begun upon but one approved project under this program, the addition to the Nevada City Hospital. Two more county hospital projects will start construction in the immediate future, Dunklin and Phelps counties. It is regrettable that \$2,000,000.00 available to Missouri in 1948 was not used, and will be returned to government funds. Have we been diligent?

I am well aware of the many complications and problems involved in building hospitals, and particularly when federal regulations are concerned. However, I recommend:

1. That the Missouri State Medical Association, through the committees on Rural Medical Service and Medical Education and Hospitals, take more active part in the promotion of more hospitals and diagnostic facilities in rural Missouri.

2. That these committees familiarize themselves thoroughly with the Missouri Hospital Construction plan as

it now exists and keep informed of changes as they occur.

3. That these committees offer their assistance to the Division of Health and its Advisory Council to the end that this Hospital Construction Plan may be accelerated.

The committee on Postgraduate Course is suggesting in its report that the committees on Postgraduate Course and Scientific Work be combined. I feel that this is a good recommendation. The Committee on Postgraduate Course works with the members throughout the year and should be in a position to know what the members of the Association want on an Annual Session program. The program of the Annual Session is Postgraduate work, and, as such, properly lies within the scope of the activities of this committee. I know that the Committee on Scientific Work surveyed the membership on the wishes for this program, and based the program of this Session on the requests received. Therefore, a combined committee would be in a position to know what is wanted and it seems to me the merging of the two committees would accomplish the desired results and eliminate the overlapping responsibility. I hope the House of Delegates will consider this request.

Today, the battle cry of medicine is that we must maintain "good public relations." We are all aware of the great importance of good public relations. We have recently subscribed to the fund of the American Medical Association for a public relations program, but we must remember that money alone cannot buy good will for the medical profession. Despite all the effort of the American Medical Association and your State Medical Association, the fact remains that the action of the doctor in his own home town wins the most friends. Community respect and good will are things which cannot be obtained over the counter. The thoughts and opinions of free men are not for sale.

The question we face in this critical year of 1949 will not be resolved in the halls of Congress, but will be decided on main street by your neighbor and mine. Therefore, I urge each of you in your daily lives to exemplify and live by the oath—the Oath of Hippocrates which we swore to uphold. Then the glorious traditions of the free enterprise system of medical care will prevail.

If we do this, we cannot fail.

The report of the Secretary, W. A. Bloom, M.D., Fayette, follows:

#### REPORT OF THE SECRETARY

On December 31, 1948, the official membership of the Missouri State Medical Association was 3,478. There was a net gain of ninety-four members from December 31, 1947.

##### Status of Membership

Number of members, January 1, 1948 .....	3,384
New Members .....	221
Reinstated .....	36
Total .....	3,641
Dropped .....	45
Deceased .....	78
Transferred .....	40
Total, January 1, 1949 .....	3,478

Of this number 334 are Honor Members.

The Committee on Nominations which is appointed by the President from the House of Delegates must submit nominations for the following offices:

Three Vice Presidents to fill the vacancies created by the expiration of the terms of B. E. DeTar, M.D., Joplin; D. P. Dyer, M.D., Sedalia, and P. W. Jennings, M.D., Canton.

Two Delegates and corresponding Alternates to the American Medical Association to fill the vacancies created by the expiration of the terms of Robert Schluter, M.D., St. Louis, Alternate, F. G. Pernoud, M.D., St.

Louis; and James R. McVay, M.D., Kansas City, Alternate A. J. Campbell, M.D., Sedalia.

The terms (two years) of the Councilors of the even numbered districts expire this year: W. F. Francka, M.D., Hannibal, Second District; Otto W. Koch, M.D., Clayton, Fourth District; Robert W. Kennedy, M.D., Marshall, Sixth District; Walter S. Sewell, M.D., Springfield, Eighth District; Frank W. Hall, M.D., Cape Girardeau, Tenth District. Delegates from these districts shall meet on the morning of the third day and elect the Councilor for their district. The election must be certified to the House of Delegates on a prescribed form which will be furnished. Lists of delegates from the various districts will be available to the Councilors at the Registration Desk.

The session will convene for four days beginning Sunday, March 27, at 2:00 p. m., with a session of the House of Delegates, and closing Wednesday afternoon, March 30. A recessed session of the House of Delegates will be held Monday, March 28, at 4:30 p. m. and the final session of the House will convene at 1:30 p. m. on March 30. There will be a dinner for presidents and secretaries of county societies on Sunday evening, March 27. The Annual Banquet in Honor of Past Presidents will take place Monday evening, March 28, at 7:30 p. m. at Hotel President.

W. A. BLOOM, Secretary.

The report of the Executive Secretary follows:

#### REPORT OF THE EXECUTIVE SECRETARY

Your Executive Secretary wishes first of all to thank the officers and committees for their kindness to him and for their invaluable counsel and advice in helping to carry out the program of the Missouri State Medical Association.

In your Field Secretary, Ray McIntyre; your Assistant Editor, Helen Penn; Lorraine Kramer, Catherine Burnett and Bertha Thomas, you will find a most loyal group of persons devoted to your interests. I extend to all of them my sincere thanks for their valuable assistance.

The Annual Session should prove to be one of the most successful in history. The program which has been arranged by the Committee on Scientific Work is literally your program. You will recall that cards were sent to you last summer asking for your suggestions and help in arranging the program. Your suggestions have been followed completely. Scientific and technical exhibits will bring before you the latest advances in medicine. You are urged strongly to visit the various booths during the intermission periods provided for that purpose. The revenue derived from the technical exhibits makes it possible to have better scientific programs.

The activities of the various committees are recorded in the reports. Mr. McIntyre and I attend all committee meetings as well as Councilor District meetings. We have represented the Association at meetings of organizations such as: Farm Bureau Federation, Social Planning Council, Missouri Health Council and others. Mr. McIntyre is a member of the executive committee and also chairman-elect of the Missouri Health Council. I was a guest at the annual meeting of Community Chests and Councils in Chicago and participated in a panel discussion on medical care at that meeting. Mr. McIntyre and I have made talks at various Kiwanis, Rotary and Lions club meetings throughout the state. Last June I was elected to serve as a member of the executive committee of the Annual Conference of Presidents and other Officers of State Medical Societies. A record was not made of all meetings in which we participated, however, those mentioned were the more important.

T. R. O'BRIEN, Executive Secretary.

MR. O'BRIEN: The following honor members are eligible for Affiliate Fellowship in the American Medical Association: Drs. Peter T. Bohan, Kansas City; Jonathan E. Burns, Charles Town, W. Va.; F. A. Carmichael,



# A Significant Advance in ANTIBIOTIC THERAPY

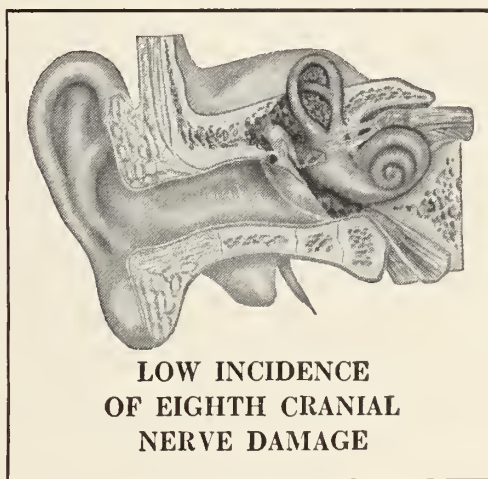
*Note these five favorable attributes  
of Dihydrostreptomycin Merck*

- (1) Low incidence of vestibular disturbances
- (2) Significantly less toxic
- (3) Less frequent allergic manifestations
- (4) Highly purified
- (5) Undiminished antibacterial activity against *Mycobacterium tuberculosis*

A NEW, highly purified antibiotic, chemically distinct from streptomycin, with greatly reduced neurotoxicity, Dihydrostreptomycin Merck is especially useful in cases requiring relatively high dosage, such as miliary tuberculosis and tuberculous meningitis.

It can be used interchangeably for intramuscular therapy with Streptomycin Calcium Chloride Complex Merck or other forms of streptomycin.

*Descriptive literature is yours for the asking.*



**DIHYDROSTREPTOMYCIN  
MERCK**

(supplied as the sulfate)



MERCK & CO., Inc.

*Manufacturing Chemists*

RAHWAY, N. J.

Kansas City; Paul F. Cole, Springfield; Clyde P. Dyer, Webster Groves; John D. Hayward, St. Louis; Joseph D. James, Springfield; Frederick C. Lamar, Kansas City; A. Edward Meisenbach, St. Louis; W. A. Myers, Kansas City; Thomas M. Paul, St. Joseph; Abram T. Quinn, St. Louis; Hudson Talbott, St. Louis; James A. Townsend, Eureka; Arthur W. Westrup, Webster Groves; J. Lee Harwell, Poplar Bluff.

**SPEAKER:** If there is no objection, we will suspend the order of business and hear a representative of the Treasury Department, Mr. Peters.

**MR. MIZE PETERS:** It is indeed an honor to speak before this body this afternoon. I do appreciate it personally and as a representative of the Treasury Department and I want to thank you for bearing with me for a few minutes. We are always asked to present this message; it is not new to any of you. It will be more of a reminder than anything else. The Savings Bond program has been in existence some eight years, and it has improved and enlarged in its popularity. As evidence of that, during 1948 there were approximately 18,000 large companies that had the payroll deduction plan in operation. We increased that some 2,000 now having more than 20,000 concerns, with 100 or more employees, that are regularly making payroll deductions each month for Savings Bonds. There are more than 7,000,000,000 that are now participating, and their savings prior to 1948 was approximately \$7,500,000.00; today, it is \$150,000,000.00 monthly.

We also have a plan which is especially attractive to the professional person, or the self-employed. That is called the Bond a Month program. This program is that you authorize your banker to debit your account each month for whatever amount you tell him to take out, and there has to be enough taken out each month to purchase a bond. Under the payroll deduction plan the employee may authorize whatever amount they want, let that accumulate, and then the bond is issued. Possibly some of you have heard of the program, the drive—we hate to call it a drive—but that is what it is, and from May 15 through June 30, 1949, there will be another drive, and the national quota is \$1,040,000,000.00. I believe that is more than a billion dollars, I am not sure. If you get above \$1,000.00, I cannot count. I think Dr. McAlester will acknowledge that I am not much of a counter. I do not see too well. There probably will be special programs in each county, and in Jackson County we are tying it up with the Forty-niners in this golden opportunity drive. They used to get gold in California; now they can get it in their own locality by purchasing Savings Bonds. Starting May 15 the motion picture industry has underwritten the entertainment, and I think they have set aside some \$150,000 for this. The plan now is to buy fifty covered wagons. Each will be equipped with a public address system. They will start from Independence, all Forty-niners started from there, you know, and will start for each state. At key cities the wagons will be set up as bond booths. That is the afternoon program and at night there will be entertainment at the Municipal Auditorium on May 15. We are going to our quota, which is over \$7,000,000.00 for Jackson County, in E. Bonds. We want to get that quota raised by the fifteenth so that we can be an example for the rest of the country. I am not going to bother you any longer. I just wanted to remind you that the program is still going and going strong, and it gives you an individual sense of security to know that you have Savings Bonds put away each month. Thank you.

**SPEAKER:** We have another guest this afternoon from the Missouri State Board of Nurses Examiners, Virginia Harrison. She would like to speak to you about the Brown report in reference to the future. Miss Harrison.

**VIRGINIA HARRISON:** I want to thank you for letting me come before you and talk to you about the Brown Report. We think that it is so important that it will affect all people in the United States, not only pro-

fessional people, doctors, nurses and others, but also every man women and child living in this country, so I will do my best to give you a brief summary of what Dr. Brown has done. She is a Ph.D. from Yale University. She was loaned to the National Nursing Council by the Foundation, and the survey which she did took over a year, financed by the Carnegie Foundation. "Nursing for the Future" was printed and distributed by the Russell Sage Foundation. Rockefeller Foundation, itself, gave us over 2,000 copies for distribution. I have hopes that you have read them. The book is an attempt to decide who shall organize, administer and plan nursing education. We are trying to find out how better to distribute nursing service in the entire United States. We realize there are many things wrong with nursing education. We are attempting to make some changes in the present systems. Your President spoke on the needs for rural nursing. If one is in the rural areas it is difficult to get trained nursing service of any sort, let alone a prepared person of the lower level.

This program is an aid to try to prepare people better to meet the health needs. The present system of nursing education, with the orderly, the practical nurse, the untrained attendant, the student nurse, the three year graduate, the college graduate, gives a completely inadequate profession for future needs. Dr. Brown's recommendations, therefore, center about the three levels of nursing education. She talks first of the practical nurse, people with some training. We had better give them the best we can in the short time they are in training. She speaks of the college graduate, feeling as she does that nursing service and nursing education should be at the professional level. She feels that it should be a four and a half year program, and that the present course, the three year school graduates, take entirely too long a time for what they have to do in three years. Therefore, she recommends that the course, the present three year course, be cut to a two year or two and a half year program. We hope in that way to increase the number of ambitious young women entering school. We feel that they will be able to do so if they do not have to spend three years working for a diploma in nursing.

Dr. Brown understands the need for men nurses; she feels that there are a great many fields in which men nurses could be used, and Negro nurses are needed. The Negro people we feel should be afforded better nursing service, and we know that they have splendid nurses. There should be no color line, nor religious line; no creed or distinction among any peoples rendering nursing service to all other people.

She emphasizes the true concept throughout.

As doctors you will be working, as you always have, with nurses. In fact we will be working much more closely together. You are contributing what you have to contribute and we what we have to contribute and bringing in the practical nurse, a trained person, to do what she can, along with x-ray technicians, the laboratory technicians, the public health nurse, the social worker, the psychologist. At this time we are making our first survey of the nursing schools, to set up a list of accredited schools. Those schools have all received questionnaires, and it will not be long, possibly by the first of June, we will have a list of the present schools of nursing. We will make an attempt to separate the sheep from the goats. We believe there are a good many goats among our schools of nursing. We hope to use those schools as clinical fields for the nurses, in which they can get their education, but not to carry on nursing education, as such. Each one of us, each one of you has a responsibility in nursing service. You benefit directly from the kind of nursing service you get. We hope that we can call on you for your cooperation. We need all the help we can get. I feel strongly about the way men think. I think we need all the male thinking we can get from you. We will be so grateful for your cooperation and any help you can



give us. We hope that you will look upon our feeble efforts groping toward professional status, and that you will give us a helping hand. I thank you for giving us this time to present this report to you, and I hope I have your cooperation.

The report of the Committee on Tuberculosis, E. E. Glenn, M.D., Springfield, Chairman, follows:

#### REPORT OF THE COMMITTEE ON TUBERCULOSIS

The committee met in St. Louis on March 12, 1949, in joint session with the representatives from the Missouri Tuberculosis Association and representatives of the State Division of Health. The main objectives of this meeting were to evaluate the tuberculosis cases since January 1, 1948, as reported by the physicians of the state in reply to our letter of January 14, 1949, and to discuss ways and means of making available more and better institutional care for tuberculosis patients.

Members of the Missouri State Medical Association reported 3,575 cases of tuberculosis. This includes the new cases referred to sanatoria and the cases seen in tuberculosis clinics. There were 347 replies received to the questionnaire. Of this total, 179 reported that they saw no new cases of tuberculosis in their practice during the year of 1948; 168 physicians reported the total number of cases listed. At present all tuberculosis institutions in Missouri are filled to the capacity possible, with present medical and nursing staffs, with the exception of the Jasper County Tuberculosis Hospital at Webb City. Approximately twenty-two more patients, primarily of custodial care status, could be taken care of at Webb City, and some \$20,000.00 additional funds are available for yearly operation. The patient per diem cost is less at Jasper County Sanatorium than at the Missouri State Sanatorium, so that a transfer of custodial patients from Mt. Vernon to Webb City would be a matter of economy for the State, and at the same time make available more beds at Mt. Vernon for acute cases. With this in mind the following motion was passed by our committee: That an approach be made to the Appropriations Committee of the Missouri legislature for facts and figures pointing up the difference in cost of patient's care at the Jasper County Sanatorium at Webb City and the other sanatoria in the state, which would result in a substantial saving in life and money to the appropriation of additional funds to open twenty-two beds at Jasper County Sanatorium for the custodial care of elderly tuberculous patients.

Members of the committee feel that there should be more use made of general hospital beds for at least the diagnosis and early treatment of tuberculosis. The question of chest x-rays on all hospital admissions in the state was discussed but the committee decided to make no recommendations on this matter at present. It was brought out that many nursing schools will not allow their students to handle tuberculosis cases during training; also, that many nurses have some misconception as to the factors involved in caring for these patients. At the conclusion of this discussion, a motion was adopted, to-wit: That members of the Committee on Tuberculosis of the State Medical Association meet with representatives of the State Tuberculosis Association, the State Division of Health, State Hospital Association, State Catholic Hospital group, St. Louis and Kansas City Tuberculosis societies and the State Medical Association Committee on Medical Education and Hospitals to discuss the problem of hospitalizing the tuberculous patient in general hospitals over the state.

Facts and figures presented to our committee by the superintendent of the State Tuberculosis Sanatorium definitely show the great need for additional physicians at that institution. The sanatorium is not approved for residencies primarily because of the lack of American Board of physicians on the staff in the categories of thoracic surgery and internal medicine. Residency approval would make possible the securing of residents

under training, which in turn would add needed physicians to the staff. It was therefore voted that the Committee on Tuberculosis of the Missouri State Medical Association meet with the various councils of the State of Missouri to discuss the possibility of having special job classifications set up under the State Merit System for an American Board physician in thoracic surgery and an American Board physician in internal medicine.

Following a discussion of many of the factors involved in the efficient operation of the State Sanatorium the committee passed a motion, to-wit: That the Missouri State Medical Association lend its support and assistance in securing from the Missouri Legislature adequate funds for the Sanatorium under (1) general appropriations, (2) rehabilitation and services, and (3) education of patients of school age, and that rehabilitation, including social services and occupational therapy, elementary and secondary education are reemphasized as therapeutic measures in the treatment of tuberculosis.

The report of the Committee on Scientific Work, W. A. Bloom, M.D., Fayette, Chairman, follows:

#### REPORT OF THE COMMITTEE ON SCIENTIFIC WORK

The report of the Committee on Scientific Work is embodied in the program which appears in the March issue of *THE JOURNAL*. The Committee feels that a practical and valuable program has been arranged and it is hoped that members will gain from the presentations at the sessions.

W. A. BLOOM, Chairman,  
A. N. ARNESON,  
REX L. DIVELEY,  
VICTOR B. BUHLER,  
W. J. STEWART,  
RAYMOND O. MUETHER.

The report of the Treasurer, C. E. Hyndman, M.D., St. Louis, follows:

#### REPORT OF THE TREASURER

The report of the Treasurer is covered in the financial statement of the Association for 1948 which appeared in the March issue of *THE JOURNAL*. Since delegates have had that issue of *THE JOURNAL* the report is not repeated in the "Reports of Officers and Committees" but delegates are referred to *THE JOURNAL*.

C. E. HYNDMAN, Treasurer.

The report of the Committee on Postgraduate Course, R. O. Muether, M.D., St. Louis, Chairman, follows:

#### REPORT OF THE COMMITTEE ON POSTGRADUATE COURSE

The Committee on Postgraduate Course met on January 16, 1949, for the purpose of evaluating the postgraduate activities of the Association during the last year and to consider plans for the future.

The Committee is pleased to report the following postgraduate activities:

1. Since the last Annual Session, Councilor District meetings have been held in Districts 2, 8 and 9 and three such meetings in District 5. Afternoon and evening sessions were held in each case. This Committee has cooperated with the Councilors in furnishing the speakers for these meetings comprising an attendance of 438 physicians.

2. In addition to Councilor District meetings, the Committee has encouraged the holding of joint dinner meetings of various numbers of societies in strategically located towns over the state. The Councilors of Districts 1, 4, 6 and 10 have found it advisable to promote such meetings in their districts in preference to the regular afternoon and evening district sessions. Five such meetings of physicians from ten counties have been held in Chillicothe, four at Wentzville of five

counties, one in Nevada inviting twenty counties, one at Sedalia of sixteen counties, one at Clinton with eighteen counties, one in Sikeston of seventeen counties, one at Kennett with ten counties, one at Farmington of eighteen counties and one at Caruthersville with seventeen counties. Speakers were furnished by the Postgraduate Committee for these joint meetings, with a total attendance of 569 physicians.

3. Many county societies are now holding regular monthly meetings with good attendances and this Committee has been privileged to furnish a number of their programs. A total of seventy-one speakers has been secured by the Committee for various medical meetings since the 1948 Annual Session. Lists of speakers and their subjects have been furnished some of the societies at their request.

4. The Committee uses this means of commending the Clay County Medical Society on its first annual Clinical Conference held in Excelsior Springs, November 4, 1948, and attended by some 125 physicians. This conference was arranged and promoted by the Clay County Society with minimal outside promotional assistance and exemplifies what a small, active, progressive county medical society can do.

5. The Missouri Heart Association was approached with the suggestion that they present a scientific exhibit at the 1949 Annual Session of the Missouri State Medical Association demonstrating the correct manner of taking electrocardiograms and giving the fundamentals of interpretation. The Kansas City Pathological Society also was approached with the idea that demonstrations of common office laboratory procedures be presented as a part of the scientific exhibit of the 1949 Annual Session. Also it was suggested to the Kansas City Anatomical Society that they plan an anatomical exhibit or demonstration as a scientific exhibit for the Association meeting; also that they present such programs at Councilor District and other large medical meetings in the western part of the state as they have offered to do. Further, it was suggested, if feasible, that they invite physicians of western Missouri to attend the weekly sessions of the society.

#### Suggestions and Recommendations

1. The Committee feels that some scientific speakers appearing before medical groups stress too much theory in their presentations. Such speakers should be cautioned accordingly.

2. The use of more younger qualified physicians on medical society programs is recommended.

3. A speaker giving the same paper at a number of meetings undoubtedly will make the paper more valuable at each appearance. Therefore, the same program well may be given at a number of different medical meetings.

4. Inasmuch as a large number of good medical motion picture films are now readily available from different sources on a loan basis, the Committee recommends that more local societies consider this type of program.

5. The number of joint medical society meetings, when a group of adjacent counties get together for an evening dinner meeting, held during the last year with the accompanying large attendances, justifies increased emphasis upon this particular type meetings.

6. The Committee recommends symposia on various medical subjects as a part of the programs of Councilor District meetings. Some subjects suggested are: peripheral vascular disease, jaundice, cancer, cardiology, obstetrics and gynecology, and pediatrics. It further is suggested that other committees of the Association develop such symposia and notify this Committee accordingly so that Councilor District meeting programs may be arranged for maximum effectiveness.

7. The Committee expresses its willingness to work with the Cancer Committee and the Committee on Health and Public Instruction of the Association, the Missouri Division of Health and the Missouri Chapter of the American Cancer Society in developing cancer programs throughout the state for both lay and professional groups.

8. Inasmuch as the scientific programs of the Annual Sessions of the Association are, or should be, a part of the Association's year round postgraduate program with which this Committee is concerned, it is recommended: That the Committee on Scientific Work and the Committee on Postgraduate Course of the Association be merged for greater effectiveness in promoting postgraduate education.

The Committee takes this opportunity of expressing its appreciation to the speakers who have given of their time and energy, and to the program committees of the various meetings for the splendid cooperation that has been given in promoting postgraduate, or refresher, instruction during the last year.

R. O. MUETHER, Chairman,  
GUY D. CALLAWAY,  
M. PINSON NEAL,  
HUBERT PARKER,  
EDWARD MASSIE.

DR. MUETHER: The Committee on Postgraduate Course offers the following amendment to the By-Laws:

Amend Chapter VIII, Section 2, page 13, lines 3 and 8, by striking out all of lines 3 and 8, and inserting in lieu thereof the following: "A Committee on Scientific and Postgraduate Work," so that the Section, when amended, will read "A Committee on Scientific and Postgraduate Work, a Committee on Publication, a Committee on Medical Defense . . ."

Amend Chapter VII, Section 2, pages 13 and 14, by striking out all of Section 2, and inserting in lieu thereof, the following: "A Committee on Scientific and Postgraduate Work shall determine the character and scope of the scientific proceedings of the Association for each Annual Session, subject to the instructions of the House of Delegates. The Committee shall provide speakers for district society meetings as requested."

Amend Chapter VII, Section 8, page 15, by striking out all of Section 8.

The report of the Committee on Publication, G. V. Stryker, M.D., St. Louis, Chairman, follows:

#### REPORT OF THE COMMITTEE ON PUBLICATION

January 1, 1948, to January 1, 1949

The 45th volume of THE JOURNAL was completed with the December issue. During 1948 there were published in THE JOURNAL seventy-three original articles, sixteen case reports, thirty-four editorials, one hundred nineteen news items, twelve organization activities, twenty-six miscellaneous articles, seventy-two obituaries, fifty-five society proceedings, one correspondence, eleven reports of the Field Secretary, eleven President's pages, thirty book reviews. There were 481 pages of reading material and 455 pages of advertising and fifteen inserts.

Advertising in THE JOURNAL from January 1, 1948, to January 1, 1949, earned \$20,749.70. Subscriptions of nonmembers amounted to \$92.50, making \$20,841.90 earned by THE JOURNAL. The cost of production of THE JOURNAL (printing and illustrations) was \$15,475.41.

G. V. STRYKER, Chairman,  
V. T. WILLIAMS,  
H. E. PETERSEN,  
FRED R. FARTHING.

The report of the Committee on Public Policy and Public Relations, F. R. Crouch, M.D., Farmington, Acting Chairman, follows:





DRINK  
**Coca-Cola**  
TRADE MARK REG.

You trust  
its quality

# MILWAUKEE SANITARIUM

WAUWATOSA, WISCONSIN

## FOR NERVOUS DISORDERS

(Chicago Office— 1117 Marshall Field Annex  
Wednesday, 1-3 P. M.)

Maintaining the highest standards for more than a half century, the Milwaukee Sanitarium stands for all that is best in the care and treatment of nervous disorders. Photographs and particulars on request.

JOSEF A. KINDWALL, M.D.  
CARROLL W. OSGOOD, M.D.  
WILLIAM T. KRADWELL, M.D.  
BENJAMIN A. RUSKIN, M.D.  
LEWIS DANZIGER, M.D.  
RUSSELL C. MORRISON, M.D.  
G. CHARLES SUTCH, M.D.  
RAYMOND HEADLEE, M.D.  
ARTHUR J. PATEK, M.D., *Consultant*

G. H. SCHROEDER, *Business Manager*

COLONIAL HALL—One of the 14 Units in "Cottage Plan."



## REPORT OF THE COMMITTEE ON PUBLIC POLICY AND PUBLIC RELATIONS

The Committee met in St. Louis on September 12, 1948, with the following present: A. C. van Ravenswaay, Boonville; John A. Growdon, Kansas City; Howard B. Goodrich, Hannibal; Robert Mueller, St. Louis; F. R. Crouch, Farmington; Armand Fries, St. Louis; Mr. T. R. O'Brien and Mr. Ray McIntyre, St. Louis.

The Committee reviewed the value of the monthly column "Medical Sidelights" and some criticism that had been made of it and Mr. O'Brien was asked to make a survey of the newspapers carrying the column and to report later to the Committee.

The Committee agreed that information about the views of the various candidates for public office on the subject of compulsory health insurance should be made available to the members. This information was published in THE JOURNAL of November 1948 and also was announced at the various councilor district meetings held prior to the election of November 2.

The Committee approved of the participation of the Missouri State Medical Association in the newly formed Missouri Health Council. It was pointed out that the Council should prove to be a valuable organization for the exchange of ideas regarding health. Mr. Ray McIntyre is chairman-elect of the organization.

The Committee approved the idea of a news letter for the Association and recommended that it be started as soon as possible.

The Committee recommended that a greater budget be allocated by the Council for public relations activities. This recommendation also included the suggestion that the State Association secure the service full time of a trained public relations consultant and any necessary personnel. This recommendation resulted in official action by the Council in reiterating the six point program of the Association which was published in the December 1948 issue of THE JOURNAL.

F. R. CROUCH, Acting Chairman,  
ARMAND D. FRIES,  
HOWARD B. GOODRICH,  
JOHN GROWDON.

The report of the Committee on Defense, C. E. Hyndman, M.D., St. Louis, Chairman, follows:

### REPORT OF THE COMMITTEE ON DEFENSE

March 1, 1948, to March 1, 1949

#### Status of Cases

Cases pending March 1, 1948 .....	3
New Cases during the year .....	2
Cases settled during the year .....	2
Cases pending March 1, 1949 .....	3

Legal fees in the amount of \$450.00 were paid during the year in the two cases which were settled. One case was dismissed by the plaintiff and the other was settled out of court.

C. E. HYNDMAN, Chairman,  
ROLAND S. KIEFFER,  
L. F. HEIMBURGER,  
O. B. ZEINERT,  
L. P. FORGRAVE.

The report of the Committee on Medical Economics, Carl F. Vohs, M.D., St. Louis, chairman, follows:

### REPORT OF THE COMMITTEE ON MEDICAL ECONOMICS

The Committee on Medical Economics wishes to report on the activities of the Association in the prepayment medical and hospital care programs of the state.

The plans in Kansas City and St. Louis had a good net increase in membership; however, the growth was cut down to some extent by cancellations. A study is

being made by the plans to find out the reasons for cancellations. It seems to be a national problem.

The total number of persons enrolled in Blue Cross plans as of December 31, 1948, is 1,128,550. The population of the state in the census of 1940 was 3,700,000. Thus, about 30 per cent of the population is covered by Blue Cross hospital service.

The total number of persons enrolled in Blue Shield medical and surgical care plans as of December 31, 1948, is 359,333. Thus, about 10 per cent of the population are members of Blue Shield medical and surgical care plans.

It is difficult to determine the number of persons who are subscribers of other forms of medical-surgical and hospital care programs. Private insurance companies in the accident and health field, railroad employee associations, the garment worker industry plan and others, no doubt, cover many thousands of Missourians.

#### Kansas City Blue Shield Surgical Medical Care

Membership, January 1, 1948.....	167,023
Membership, December 31, 1948.....	205,500
Reserve per agreement.....	\$1.40
Reserve per participant.....	.63
Number of cases during 1948.....	34,809
Amount paid to participating physicians during year.....	\$1,392,599.79

#### Kansas City Blue Cross Hospital Service

Membership, January 1, 1948.....	225,360
Membership, December 31, 1948.....	251,451
Reserve per agreement .....	\$4.11
Reserve per participant .....	1.85
Number of cases hospitalized.....	26,565
Number of days hospitalization.....	187,602
Average length of stay per patient.....	7.06
Amount paid hospitals during 1948.....	\$1,505,345.50

#### Missouri Medical Service

Membership, January 1, 1948.....	96,197
Membership, December 31, 1948.....	153,833
Reserve per agreement .....	\$6.08
Reserve per participant .....	2.96
Number of cases during year .....	13,779
Amount paid to participating physicians during year.....	\$767,272.00

#### St. Louis Blue Cross

Membership, January 1, 1948.....	787,385
Membership, December 31, 1948.....	877,099
Reserve per agreement .....	\$8.23
Reserve per participant .....	3.61
Number of cases hospitalized.....	98,519
Number of days hospitalization.....	770,983
Average days stay for year.....	7.8
Amount paid hospitals during year.....	\$6,352,218.00

CARL F. VOHS, Chairman,  
MORRIS S. HARLESS,  
C. T. HERBERT,  
GEORGE A. AIKEN,  
W. A. BLOOM.

The report of the Committee on Mental Health, Emmett F. Hctor, M.D., Farmington, Chairman, follows:

### REPORT OF THE COMMITTEE ON MENTAL HEALTH

The Committee on Mental Health, aware of the fact that 87 per cent of the mentally ill of each state must depend upon state hospitals for their care, an additional 7 per cent being cared for in veterans facilities, 3 per cent in city and county institutions and 3 per cent in private institutions, views with approval the present building and construction program



now in progress at the various state hospitals and training school to improve the housing of the patients and personnel, including the construction of homes for physicians. It is pleased with the report that the Governor has requested the President of the Missouri State Medical Association to appoint a committee to recommend what is needed to make these hospitals function as they should.

The majority of the Committee view with alarm and strongly protest a suggestion by the retiring Governor that the law be changed to permit a lay person to fill the position of Director of Mental Health and recommends vigorous insistence that this shall not happen. The appointment of a physician-psychiatrist as Director of Mental Health gave Missouri hospitals their first feeling that they were proceeding on solid ground. The discriminating application of every possible treatment approach in relieving mental illness and combinations of these; the employment of the right treatment at the right time, with the right patient, is based on sound clinical training and observation, and is possible only at the hands of a psychiatrist. The possibility of a co-ordination of the work being done in the various state hospitals with a view toward greater effectiveness in dealing with possibly the state's as well as the nation's number one health problem, together with the ultimate utilization of these great centers for research, demands that the director have a therapeutic horizon, ability to recognize approaches and to demonstrate the effectiveness of procedures. Only thus can we hope to approach realization of what is, after all, our primary job, that of integrating psychiatry and psychiatric institutions for the purpose of doing the greatest good for the greatest number of mentally ill. Unless this is so, the basis of operation will be inescapably static. We respectfully refer to the bulletin recently published by the committee on legislative research for detailed information concerning these institutions, and from which we quote: "Missouri State Hospitals on the whole are well managed, clean and as efficient as existing circumstances would appear to permit." Under proper guidance state hospitals can promote psychiatry as a scientific branch of medicine and become an effective community agent in mental hygiene.

EMMETT F. HOCTOR, Chairman,  
PAUL HINES,  
ORR MULLINAX,  
B. LANDIS ELLIOTT,  
F. M. GROGAN.

The report of the Committee on Maternal Welfare, E. Lee Dorsett, M.D., St. Louis, Chairman, follows:

#### REPORT OF THE COMMITTEE ON MATERNAL WELFARE

The Committee on Maternal Welfare herewith submits its annual report. The Committee was commissioned to obtain a speaker and to prepare a program on obstetric problems for this meeting and we feel that we have been rather successful in getting Dr. Frank Lock of the Bowman Gray School of Medicine as our guest speaker. We hope that the whole program for the meeting meets with the approval of all the members of the Association.

In a poll of the members of this Committee, the opinion has been reached that there are not enough talks given to the county societies on obstetric subjects. We would recommend that an intensive program be established for refresher courses and lecture programs at strategic points throughout the state.

We have in the last few years had no contact with the State Division of Health and would like to have some arrangement made whereby we can obtain their statistics in order to make an analysis of the problems

in the State of Missouri. The EMIC program is finished and we hope that it will not return.

E. LEE DORSETT, Chairman,  
J. L. JOHNSTON,  
E. E. WADLOW,  
J. MILTON SINGLETON,  
PAUL F. FLETCHER.

The report of the Committee on Infant Care, G. V. Herrman, M.D., Kansas City, Chairman, follows:

#### REPORT OF THE COMMITTEE ON INFANT CARE

The Committee on Infant Care met in St. Louis, October 31, 1948. The following members were present: Drs. G. V. Heerman, Kansas City; Peter G. Danis, J. C. Jaudon, Park J. White, St. Louis; L. M. Garner, Director of Child Hygiene, Missouri Division of Health; Eugene Schwartz, Springfield, and Mr. T. R. O'Brien, St. Louis.

The Committee considered the recommendations of the Missouri Study Committee of the American Academy of Pediatrics, which appeared in the January 1949 issue of THE JOURNAL of the Missouri State Medical Association, pages 38-40, and unanimously approved of them. The complete report of the Study Committee was published in the January issue of THE JOURNAL of the Missouri State Medical Association. Members are urged to study this report carefully.

The Committee assisted the Committee on Scientific Work in arranging the Obstetric Pediatric Symposium on Care of the Newborn, which will take place at the Annual Session on Wednesday, March 30, 1949.

The Committee approved a request of the Division of Health that an Institute on the problem of "Premature Newborn" be arranged in collaboration with the Missouri Hospital Association and the Missouri State Nurses' Association. The Committee will assist in developing the program for the Institute.

G. V. HERRMAN, Chairman,  
EUGENE SCHWARTZ,  
H. E. PETERSEN,  
PETER G. DANIS,  
PARK J. WHITE,  
JOSEPH C. JAUDON.

The report of the Committee on Health and Public Instruction, A. W. McAlester, III, M.D., Kansas City, Chairman, follows:

#### REPORT OF THE COMMITTEE ON HEALTH AND PUBLIC INSTRUCTION

The Committee has had approximately twenty-five meetings in which members of the Association have addressed lay groups on various medical topics and socialized medicine.

A health forum has been set up for Springfield and there will be four meetings this winter. It is anticipated that other communities will have meetings similar to the Springfield meeting.

A. W. McALESTER, III, Chairman,  
M. K. UNDERWOOD,  
B. E. DETAR,  
JOSEPH CONRAD,

The report of the Committee on Constitution and By-Laws, B. Landis Elliott, M.D., Kansas City, Chairman, follows:

#### REPORT OF THE COMMITTEE ON CONSTITUTION AND BY-LAWS

It was impossible to get this work finished in time to have it printed. About two months ago the Committee was authorized by the Council to rewrite the By-Laws, and a great deal of work has been done, due to the efforts of Drs. H. L. Mantz and Ralph Duncan, who gave liberally of their time and energy to help in the revision which has been partially completed.

In the first place, just how long ago we don't know,

this Association had a constitution. In the year 1904 they went into the Circuit Court of St. Louis and articles of association were issued by the court. At that time the Association became a corporation and, according to the lawyers, it is a corporation, and should be, in order to properly carry on. The Constitution and the Articles of Association do not agree in many respects. For one thing, in one of these documents there are three vice presidents, in the other one there are five, and there are many discrepancies. There are many discrepancies between the Constitution, the Articles of Association and the By-Laws. We do not want to go into the By-Laws much except to tell you that there has been a rearrangement of the By-Laws made; it is in the rough. It groups the Society roughly into three groups of Committees: 1. Organization, and there are the Nominating Committee, the Credentials Committee, the Reference Committee, the Constitution and By-Laws Committee, Endowment Committee, Planning Committee, Defense Committee.

(2) Another section is called Program Development and contains committees on Scientific Work, Public Policy and Public Relations, Publications, Committee on Postgraduate Courses, Medical Education and Hospitals, Medical Economics, Health and Public Instruction and Rural Medical Service. (3) There is a third group of Committees on Medical Care, Cooperation and Coordination with allied societies and organizations, such things as cancer, maternal welfare, mental health, and such. That is roughly what has been done.

Mr. Homer Berger who has for many years advised the Jackson County Medical Society on these matters was kind enough to meet with us and, as a result, we drew up another charter, and it is our suggestion that the Association adopt this charter, or authorize its officers to apply for this charter, and that the By-Laws be completed during the ensuing few months. Attorneys tell us that only the national government and the state governments and voluntary associations have a constitution. A corporation has a charter and by-laws. What we should have is a charter and by-laws. This is the charter that is suggested. It is short and simple and Mr. Berger says it will give us the powers we ought to have that we do not now have, and it will simplify certain problems. When an attorney looks at a constitution and by-laws, he looks at them having in mind the antitrust laws, the Income Tax laws, Social Security and other things of that sort. Here is the charter that has been drawn up.

#### Charter

Article I. This corporation, located in the City of St. Louis, State of Missouri, shall be known by the name and style of The Missouri State Medical Association, and by such name shall have the right to contract and be contracted with, to plead and implead, to sue and be sued, and shall have the right to acquire, own, hold, mortgage and dispose of such real and personal properties as shall be necessary for the proper maintenance and conduct of its affairs.

Article II. The purposes of this organization are to bring into compact organization the entire medical profession of the State of Missouri with a view of the extension of medical knowledge and the advancement of medical science; to promote and elevate the standards of medical education, and the enactment and enforcement of just medical and public health laws; shall encourage friendly intercourse among physicians, enjoin and sustain measures of interest and advantage to the public and the medical profession; and, to promote science, knowledge and skill among the medical profession.

Article III. This Association shall have the right to enact By-Laws providing for the government of this Association.

Mr. Speaker, in order to bring this before the attention of the assembly for action, I would like permission to introduce the following resolution:

WHEREAS, The present Articles of Association of the Missouri State Medical Association were adopted and approved by the Court in 1904, and

WHEREAS, There have been changes in the By-Laws and in the government and administration of the Association that are not in conformity with such Articles of Association, therefore be it

Resolved, That the officers of this Association shall be directed to take the necessary steps to amend the Articles of Association, so that when amended, they shall be as follows:

"Article I. This Corporation, located in the City of St. Louis, State of Missouri, shall be known by the name and style of Missouri State Medical Association, and by such name shall have the right to contract and be contracted with; to plead and implead; to sue and be sued; and, shall have the right to acquire, own, mortgage and dispose of such real and personal property as shall be necessary for the proper maintenance and conduct of its affairs.

"Article II. The purposes of this Association are to bring into compact organization the entire medical profession of the State of Missouri with the view of the extension of medical knowledge and the advancement of medical science, to promote and elevate the standards of medical education, and the enactment and enforcement of just medical and public health laws, to encourage friendly intercourse among physicians and guard and sustain measures of interest and advantage to the public and the medical profession; and to promote science, knowledge and skill among the medical profession.

"Article III. This Association shall have the right to enact By-Laws providing for the government of this Association."

Upon motion, duly seconded, the resolution was adopted and laid on the table for a year for action.

The report of the Committee on Fractures, Daniel L. Yancey M.D., Springfield, Chairman, follows:

#### REPORT OF THE COMMITTEE ON FRACTURES

The most recent meeting of the Committee on Fractures was held February 12, 1949, at Hotel President, Kansas City.

Reports were heard from individual members of the Committee concerning the treatment of fractures and the equipment in hospitals in the various parts of the state. Numerous talks and demonstrations have been made by individual members of the Committee before county societies and before lay groups.

The Committee has adopted an approved plan of cooperation with the Regional Fracture Committee of the American College of Surgeons in carrying out the following plan in reference to:

1. Hospitals: (A) It is urged that each hospital assign one member of the attending staff to instruct interns and others in the treatment of fractures and other traumas. (B) Maintain a maximum standard of treatment of fractures and other traumas. (C) Insist upon fixed traction in transportation to and from hospitals.

2. Medical Profession: (A) The Committee urges that papers and demonstrations on fractures and other traumas be presented before state, county and local medical societies, hospital staffs and any other groups that are concerned with rendering first aid or transportation of the injured.

3. Public Relations: (A) The Committee recommends cooperation with the American Red Cross chapters in training groups in fixed traction methods and establishing emergency highway aid stations. (B) Full cooperation is desired of the profession in training Boy Scouts, Girl Scouts and other similar organizations in the first aid methods of handling fractures. (C) Training of personnel who operate ambulances cannot be overemphasized.

This Committee approved the showing of several motion picture films demonstrating fracture treatment at the Annual Session this year, however, there being no facilities available for showing these films the plan was postponed.

The Committee will sponsor an instructional course in the treatment of fractures during the early part of 1950 if sufficient interest is demonstrated by the profession.

The theme of this Committee's project for the coming year is "Accident Prevention." Already plans are under way and material is being assembled for a scientific



exhibit to be shown at the Annual Session of the Association in 1950.

DANIEL L. YANCEY, Chairman,  
WILLIAM J. STEWART,  
NICHOLAS S. PICKARD,  
WILLIAM R. BOHNE,  
J. ALBERT KEY,  
JACOB KULOWSKI,  
B. L. MURPHY.

The report of the Committee on Conservation of Eyesight, C. Souter Smith, M.D., Springfield, Chairman, follows:

#### REPORT OF THE COMMITTEE ON CONSERVATION OF EYESIGHT

The Committee has had three meetings during the year and sub-committees have held several meetings. The Committee has done much of its work through the subcommittees so that certain members could concentrate on specific objectives, bringing them to the Committee as a whole for final discussion and action.

One of the things the Committee wished to accomplish was the testing of the vision of school children throughout the state. A sub-committee worked out the details of a chart and instructions to teachers and this is ready to begin with the opening of schools in the fall. The approval of the State Board of Education has been obtained and this will be of inestimable assistance.

The Committee, which is made up of members some of whom have been certified by the American Board of Ophthalmology and some who have not, has contacted all physicians in this field in the state and offered the assistance of the Committee as a whole to any physician who is qualified and wishes to become certified.

The Committee has worked closely with the Missouri Bureau for the Blind throughout the year, both as a Committee and as individual members and it is felt that this contact has been of mutual benefit. Twice during the year, representatives of the National Society for the Prevention of Blindness have met and advised with the Committee.

Based on surveys in the state, the Committee feels that a practical presentation on eye diseases would be of value on the program of the Annual Session and recommends to the Committee on Scientific Work that the Committee be allowed to suggest such a speaker for the 1950 Annual Session.

Work which is still underway by the Committee includes compulsory reporting of visual disability; better vision testing for drivers' licenses in the state; revision of portions of the Workmen's Compensation laws; co-operation with the Bureau for the Blind.

C. SOUTER SMITH, Chairman,  
ROBERT MATTIS,  
A. N. LEMOINE,  
C. P. DYER,  
ROBERT S. MINTON,  
WINFRED L. POST,  
PHILIP LUEDDE,  
JOHN MCLEOD,  
G. J. TYGETT,  
S. L. FREEMAN,  
H. B. STAUFFER,  
S. ALBERT HANSER,  
ANTON J. HUMMEL.

DR. SMITH: I would like to amplify the report slightly. The program of this Committee includes several objectives: One, to bring about the testing of each school child's eyes so that those with defective vision may have the opportunity for correction of the defects. A survey made by Dr. Tygett of Cape Girardeau, a member of this Committee, showed that a small proportion of the school children in rural Missouri had their vision tested. To rectify this state of affairs, another member of the Committee, Dr. Mattis of St. Louis, has worked out a group vision testing chart that can be published cheaply. This, with instructions for use to the teacher, will be

sent to each school in the state, so that by the time schools open next fall vision testing can be started. The Board of Education sanctions and will help in this program.

Another project of the committee is to raise the standards of ophthalmology as practiced in the State of Missouri by trying to help bring about the certification by the American Board of Ophthalmology of a larger number of Missouri ophthalmologists. The Committee is contacting all men in this field, offering its service to anyone wishing to make application to take the examination, and for those not qualified to pass it, but ambitious to become qualified, a letter has been prepared by Dr. Hanser of St. Louis furnishing information on available postgraduate courses that offer good preparation for the examination.

Further, statistics prepared by the National Society for the Prevention of Blindness show that the incidence of blindness from glaucoma is higher in Missouri than in other states, and, therefore, too high. Such would probably not be the case if the possibility of glaucoma were kept in mind by the general practitioner so that the patient might be referred for earlier treatment. This report from the National Society, and what it means, therefore, is one of the reasons that the Committee recommends that the programs of Annual Sessions include practical papers on eye diseases. Other work by the Committee, and which we hope to include next year, includes compulsory reporting of visual disability, better vision testing for drivers' licenses in Missouri, and revisions of portions of the Workmen's Compensation Laws.

The report of the Committee on Industrial Health, V. T. Williams, M.D., Kansas City, Chairman, follows:

#### REPORT OF THE COMMITTEE ON INDUSTRIAL HEALTH

The Committee on Industrial Health met in St. Louis, November 29, 1948. The following attended the meeting: Drs. Williams, Sutter, Roebber, Fessenden, Ziegler, McAdam, Messrs. Johnson and Garber of State Division of Health, T. R. O'Brien.

For some time the Committee has urged the establishment of courses in industrial health at the medical schools of St. Louis and Washington universities in St. Louis. The Committee is pleased to report the universities have agreed to begin the course in the classes beginning September 1949. It is the plan of the Committee to sponsor the opening program at the medical schools, making arrangements for a morning program at Washington University and an afternoon program at St. Louis University, the entire student body to be invited to attend. The same program would then be repeated in Kansas City on the day following the St. Louis meetings. An outstanding group of out of state specialists in the field of industrial health will be invited to participate in the presentation.

It is suggested that the cost be borne equally by the Association and the Division of Health of the State of Missouri. If the House of Delegates approves, the Council of the Missouri State Medical Association will be asked to appropriate the necessary funds.

The February 1948 issue of THE JOURNAL of the Missouri State Medical Association was devoted to "Industrial Health" and the Committee assisted in securing the various papers which were published in that issue of THE JOURNAL.

Mr. Scott Johnson of the Missouri State Division of Health is to present data to the next meeting of the Committee regarding publishing a pamphlet which will contain information of advances in the field of public health.

V. T. WILLIAMS, Chairman,  
HORACE F. FLANDERS,  
E. M. FESSENDEN,  
A. M. ZIEGLER,  
CHARLES R. MCADAM.

The report of the Committee on Anesthesiology, Joseph McNearney, M.D., St. Louis, Chairman, follows:

#### REPORT OF THE COMMITTEE ON ANESTHESIOLOGY

During 1948 the American Society of Anesthesiology held its first annual meeting in St. Louis. A fine scientific program was offered and numerous problems were discussed. At the business sessions, there was established a House of Delegates; each state shall have one delegate for each 100 members, or fraction thereof, in its state society of anesthesiology. The American Society of Anesthesiology split the country into twenty-two sections. Each section is entitled to a board director member, Missouri having Kansas and Colorado in its section.

During the year the Missouri State Society of Anesthesiology was organized as a component of the American Society and held its first meeting in Kansas City, where officers and delegates to the national meeting were elected. Forty-eight members composed the first roster of the Missouri State Society of Anesthesiology. During the year three new members were added to the faculty of St. Louis University Department of Anesthesiology. The course was enlarged by a series of lectures to the junior medical students.

We were called upon for one radio speaker on anesthesiology.

Two hospitals in St. Louis, DePaul and Firmin Desloge, now have full time anesthesiologists. An attempt is being made by the Missouri Society to encourage part time anesthesiologists to avail themselves of training being sponsored by the Missouri Society.

The report of the Committee on Rural Medical Service, R. W. Kennedy, M.D., Marshall, Chairman, follows:

#### REPORT OF THE COMMITTEE ON RURAL MEDICAL SERVICE

##### Introducing Interns and Residents to Rural Practice

Today interns and residents, during their medical training period, hear little about the fine opportunities and advantages of rural practice. Most of them receive their training from medical schools located in cities, from hospitals located in cities and under instructors who are specialists. Such a situation is not always conducive to selling young doctors on rural practice. \*

What can be done about this matter in Missouri was the question members of the Committee on Rural Medical Service of the Missouri State Medical Association kicked around for some time before launching the following project.

The Committee in cooperation with the Jackson County Medical Society arranged an evening meeting on May 18 of all interns and residents of the hospitals in Kansas City and St. Joseph. The meeting was held at General Hospital No. 1 in Kansas City and began with a complimentary steak dinner. Following the dinner a "Rural Medical Practice Panel Discussion" was presented. Four young practitioners from rural Missouri participated on the panel with the President of the Missouri State Medical Association serving as moderator. The panel members were selected to represent rural medical practice under varying conditions. One member was from a town of 1,800 population with the closest hospital 30 miles distant; another from a town of 600 population with good hospital facilities; another from a town of 3,200, practicing in a partnership, with good hospital facilities 10 miles distant; and another from a town of 3,200, practicing in a partnership, with good hospital facilities 10 miles distant; and another from a town of 6,100 with a group practice set-up and good hospital facilities.

The interns and residents were invited to write any questions concerning rural practice they had in mind. The moderator of the panel then read each question

and requested a certain member or members of the panel to answer from their personal experience. Many more questions were asked than could be answered during the time allotted. Some of the questions asked of and discussed by the panel are:

1. Do you ever hesitate to refer patients to larger towns for fear of losing them?
2. To what extent does the public recognize the specialty boards?
3. What are charges in rural practice?
4. What constitutes adequate equipment?
5. Do you dispense your own drugs? If so, why? If not, why not?
6. How do you get hospital connections?
7. How do you arrange for days off, vacations and postgraduate study?
8. Why do you like to practice medicine in rural Missouri?
9. What particular type of cases, occurring frequently, give you the most concern?
10. How can a young doctor best find a rural community which will suit his desires and which needs his services?

At the close of the panel session all interns and residents were invited to look over the information on locations as collected by the Information Bureau of the Executive Office of the State Association and to discuss in detail any of these locations with the Executive and Field Secretaries.

A number of young physicians present at the meeting have since established their practice in rural Missouri.

In view of the success of this meeting a similar one was held in St. Louis, February 21, 1949, for interns and residents in that area through the cooperation of the St. Louis City and St. Louis County Medical societies with our Committee. This occasion began with a complimentary dinner in the banquet room of the St. Louis Medical Society followed by a discussion of specific questions on rural practice by a panel of six rural practitioners, moderated by the President of the State Association. Those questions discussed were ones actually presented the panel by those interns and residents present. Consideration is being given to the idea of making these meetings annual affairs, both in Kansas City and in St. Louis.

##### The Missouri Health Council

The Missouri Health Council was organized formally on July 22 at a meeting in Jefferson City of approximately twenty-five representatives of fifteen state-wide organizations and agencies with a fundamental interest in health. The purpose of the Council is set forth as follows: To bring together state-wide organizations and agencies, with a fundamental interest in health, for discussion, debate and interchange of opinions and planning; to serve as a clearinghouse on health problems and programs; to facilitate joint planning in order to encourage coordination of efforts on state and local levels.

For the most part, the organizations and agencies in this state with health programs know little of the what and why of each other's activities. If the Council functions as it should, it is reasonable to assume that this situation will be corrected to a large extent. With such correction, there should follow better relationships between groups working on health problems, more cooperation and less duplication of effort.

The Missouri State Medical Association is one of nineteen organizations and agencies represented on the new Missouri Health Council with its Field Secretary as official representative.

Mr. Chester Starr, Director, Rural Health Service, Missouri Farm Bureau Federation, was elected chairman of the Council; Mr. Ray McIntyre, Field Secretary, Missouri State Medical Association, chairman-elect and Mr. Robert Clough, Missouri Field Representative of the American Red Cross, secretary-treasurer. The



# many things to consider



The choice of an oral estrogen depends on many factors—potency, dosage, safety and cost. On the basis of cost alone, a sound choice is difficult. An oral estrogen that appears to “cost less” may be wanting in potency; another may provoke troublesome side actions. On the basis of potency, however, the differences among oral estrogens are enlightening.

# ESTINYL



(brand of ethinyl estradiol)

## *is by far the most potent oral estrogen*

in clinical use today. ESTINYL\* is from 7 to 87 times as potent as the most active stilbenes in use. ESTINYL is given in almost incredibly small dosage—as little as 0.02 mg. (1/3200 gr.) which is sufficient to control menopausal symptoms in many cases.

*This extraordinary clinical activity has practical importance. It is characterized by virtual freedom from untoward reactions. Such low dosage obviously results in lower cost.*

There are many things to consider in choosing an oral estrogen. Duly considered, ESTINYL is an oral estrogen of choice.

ESTINYL Tablets, 0.02 or 0.05 mg., in bottles of 100, 250 and 1000.

ESTINYL Liquid, 0.03 mg. per 4 cc. (teaspoonful), in bottles of 4 and 16 oz.

\*®

# Schering

CORPORATION • BLOOMFIELD, NEW JERSEY  
IN CANADA, SCHERING CORPORATION LIMITED, MONTREAL



executive committee is composed of John Williams, M.D., Division of Health; Carl F. Vohs, M.D., President, Missouri Medical Service; Mr. Donald Pratt, Executive Secretary, Missouri Tuberculosis Association, and Mrs. Milton Duvall, State Advisor of Women's Activities, National Foundation for Infantile Paralysis.

The Council is primarily concerned at present with the promotion of local health councils for all areas of the state. These local health councils are viewed as the action groups in the solution of local health problems.

Two preliminary meetings were held before the July 22 meeting culminating in the formal organization of the Council. These meetings were all called and sponsored by our Committee on Rural Medical Service.

#### Location of Physicians in Rural Missouri

During the year 1948, eighty physicians located in rural Missouri.

The executive office of the State Association maintains a list of promising openings over the state and encourages every physician who is thinking of a change or new location, to consult the list. All available information concerning each opening is correlated for the benefit of the inquiring doctor. The Field Secretary of the Association personally visits these listed openings so that more detailed and tangible information can be given inquiring physicians.

#### Rural Hospital Construction

During 1948 three general hospitals were opened and three others added to in rural Missouri; construction began on five others, as well as on one sizable addition, all without allocation of any state or federal funds.

Under the provisions of Public Law 725 it is anticipated that final plans will be approved and contracts let for five new county hospitals in Dunklin, Lincoln, Pemiscot, Perry and Phelps counties by July 1, 1949. A thirty-five bed addition to the Nevada City Hospital has been approved under this law and the contract let.

#### Health Forums

The Committee on Health and Public Instruction of the Missouri State Medical Association and the Woman's Auxiliary of the Association are cooperating in promoting medical speakers before lay groups including civic clubs, women's organizations, school assemblies and teachers' organizations. Plans are now under way for initiating evening health forums, free to the public, in specific rural areas of the state.

#### Scholarships for Medical Students

The Woman's Auxiliary of the State Medical Association has established a scholarship loan for the purpose of assisting a worthy student through medical school. The Auxiliary plans to increase the number of these scholarship loans as soon as possible. Although the main objective of this constructive project is to aid students from rural Missouri to attend medical school, it is not restricted thusly.

#### Rural Prepaid Medical Care

Recent extension of benefits by Surgical Care Inc. of Kansas City and Missouri Medical Service of St. Louis has given impetus to increased enrollment in these prepaid surgical and medical care plans. The co-operation of the Missouri Farm Bureau Federation has been a large factor in the enrollment of groups in rural Missouri. The opening of new rural hospitals and the location of additional physicians in rural areas have exerted measurable influence on the extension of prepaid medical care.

#### A Four-Year Medical School for the University of Missouri

Why should not Missouri boys who desire to study

medicine and to care for the medical needs of the citizens of this great state have opportunity to secure their training in a four-year state medical school operated as a part of the University of Missouri? It is a reasonable assumption that a four-year University of Missouri Medical School would return young doctors to rural Missouri. Our Committee feels that more young men and women should be trained in medicine and that the present University of Missouri two year medical course should be expanded into a grade A four year medical course.

#### National Conference on Rural Health

Our Committee was well represented at the fourth annual meetings of the National Conference on Rural Health held in Chicago, February 4 and 5, 1949, under the auspices of the American Medical Association and the leading National Farm Organizations. More than 500 health leaders from every section of the country attended this two-day session.

A majority of the farm groups favored a voluntary plan for medical care and urged local solution of health problems. They felt also that the government should extend some financial assistance to young students entering medical school instead of pushing a multi-billion dollar sickness insurance program which would be financed by payroll deductions.

Several speakers strongly urged the medical profession to encourage doctors to enter rural areas to practice and at the same time urged rural communities to make rural practice more attractive to the young doctor by attempting to improve facilities.

R. W. KENNEDY, Chairman,  
E. C. BOHRER,  
PAUL BALDWIN,  
H. E. PETERSEN,  
WALLIS SMITH,  
W. A. BLOOM,  
W. F. FRANCKA,  
J. F. JOLLEY,  
A. L. HENSEN,  
GEORGE W. NEWMAN,  
A. S. BRISTOW.

DR. KENNEDY: There has been another dinner meeting for interns and residents, held in Kansas City at the General Hospital on March 15. Sixty-five persons were present to ask questions and listen to the discussion on the problems and virtues of rural practices presented by a panel of four physicians practicing in rural areas.

The Committee feels that meetings of this type are giving practical and much appreciated information on establishing practice for young men beginning to seek locations.

The four physicians on the panel of this meeting were Drs. Glenn Hendren, Liberty; A. E. Spelman, Smithville; O. B. Barger, Harrisonville, and F. A. Santner, Lathrop.

The report of the special Committee on Medicolegal Testimony, Llewellyn Sale, M.D., St. Louis, Chairman, follows:

#### REPORT OF COMMITTEE ON MEDICOLEGAL TESTIMONY

At a meeting of the Council, held on June 28, 1948, it was voted that the President be authorized to appoint a committee to study the question of the abuse of medical expert testimony. The motion directed the committee to submit a report of this subject and make suggestions for raising the standards of such testimony, if it concluded that such recommendations were desirable and could be put into effect. Dr. Mueller, the President, appointed the following committee: Drs. B. Landis Elliott, Wm. J. Stewart, L. C. Forgrave, D. L. Yancey and Llewellyn Sale.



On November 29 a meeting of the committee was held with Mr. Forrest Hempster, President of the Missouri State Bar Association, and Mr. Bob Cunningham, President of the St. Louis Bar Association. The plan in effect in Minnesota since 1940 was outlined. The representatives of the legal profession expressed interest in the suggestion that the bar and medical association cooperate in adopting such a plan for the State of Missouri. Our members felt that the effort to do this should be on a statewide basis. The Bar Association representatives were of the opinion the problem should be considered first by a committee of the St. Louis Bar Association. They thought such a committee could be more readily called together. If their deliberations resulted in concrete suggestions these would be reported to the State Bar Association for study and eventual action. There was much unavoidable delay in appointment of the committee representing the St. Louis Bar Association, with a committee of five finally appointed. Four members of the St. Louis Bar Association committee met with the members of our committee, and at this meeting Dr. Robert Mueller and Mr. Tom O'Brien were present. The provisions of the Minnesota plan were outlined; there was a free discussion of the question of medical expert testimony. Two members of the committee of the Bar Association expressed the opinion that there was no real need for such an action because medical expert testimony was now on a high plane. One of the committee thought that more time should be devoted to a study of the problem. A fourth member of the committee was in favor of joint action on the part of the bar and medical professions in adopting a plan to put medical expert testimony on a somewhat higher plane. It was decided that the important available information in the literature be assembled and studied by the committee members. After a lapse of sufficient time for orientation, the committee was to be called together again by the chairman of the committee of the Bar Association.

**SPEAKER:** Dr. John Williams of the State Division of Health is here, and no doubt you would like to have him give some remarks on the hospital construction program, bringing it up to date.

**JOHN W. WILLIAMS, M.D.,** Jefferson City: Last year at this time I gave you the preliminary report of the results of the hospital survey and the development of the hospital plan. I believe I expressed at that time our concern regarding the possibility of the development of hospitals in the areas in the state where those hospitals are most needed because of lack of local funds. After a year's experience, we have found that those fears were actually borne out, and that even though every application in the rural areas of the state has been processed and funds allocated to them, we still have gone only a small way in the provision of hospital beds. I want to emphasize to this group, that unless the architects fall down on the job, we are not going to lose any money, by diversion to the federal government. We are operating at the present time, out of the 1948 allotment. If all the projects come through to whom funds have been allocated, we cannot even pay the bills. So that, there is no concern on our part that we will not be in a position to use the funds, as they are allocated.

An applicant for a hospital under the program first submits a Part I Application; that is the preliminary informational portion, giving the amount of funds which they have available and a short description of the hospital they intend to build or expand, and a rough sketch of the floor plans. When those have been approved, the next step is the submission of schematic drawings of the hospital. When those have been approved, the working drawings and specifications are ready for bids. It has been our experience to date that it takes the architect from six to nine months to complete the working drawings in the intermediary stage. If any of these hospitals do not come through, it is because of the inability to get contracts let.

The hospital at Rolla, which was number one in the program at the present time, opened their bids and found themselves \$150,000.00 over the money which they have to spend. Consequently they are now negotiating with the low bidder to take off part of the hospital and bring it down within their funds. The federal allotment to that hospital is \$215,451.00. Perryville in Perry County is in the stage of working drawings being reviewed. That is the final stage, preparatory to contract letting. Federal funds allocated to that institution are \$176,133.00. Troy in Lincoln County is working on the original plans for a 50 bed hospital; their allocation \$187,500.00. In Dunklin County the contract has been signed for their hospital. When the bids were opened, they were \$200,000.00 over the funds which the county had available. There was an election scheduled fifteen days later for another purpose, and they were fortunate enough to get another bond issue through, so that they could sign the contract for the 65 bed hospital as originally was planned, giving them an allotment of \$316,000.00. The Pemiscot County Hospital at Hayti is in the process of making working drawings in the preparation of their specifications. They have been promised by March 28, with \$173,062.00 in the grant. Nevada City Hospital, an addition of 34 beds onto the city hospital, has been met and is now under construction. The footings for the hospital are now in. There was \$125,000.00 in that grant. The Kirksville, KCOS, an addition of 60 beds, is in the process of working on their final drawings and specifications. Their allocation is \$261,416.66. Menorah Hospital in Kansas City, for the construction of 34 psychiatric and 50 chronic disease hospital beds, are working on their final drawings and specifications, with an allotment for only that portion of the hospital which dealt with these two special categories for \$496,725.00. The Butler County Health Center, at Poplar Bluff, is working on their final drawings and the grant is \$25,000.00. St. Louis City Health Centers, two of them, are working on their final drawings and specifications; the grants there are \$326,666.00. The total, if all of these hospitals come through, would be \$2,302,954.00 of federal money. The grant to the state is \$2,280,213.00. The local funds which are being used to match this grant total \$5,119,382.00. The total program as of Saturday is \$7,422,337.11.

I believe that brings us up to date and that covers all allotments of the 1948 Federal grant made to the State of Missouri for hospital construction. On July 1, we will begin the allocation from the 1949 allotment, which is just slightly reduced, but still totals \$2,200,000.00.

The report of the Council, J. W. Thompson, M.D., St. Louis, Chairman, follows:

#### REPORT OF THE COUNCIL

The Council met at the Sheraton Hotel, St. Louis, on June 5, 6, with J. W. Thompson, M.D., St. Louis, Chairman, presiding. Those present were H. E. Petersen, St. Joseph; W. F. Francka, Hannibal; Otto W. Koch, Clayton; J. W. Thompson, St. Louis; J. F. Jolley, Mexico; R. W. Kennedy, Marshall; E. C. Virden, Kansas City; W. S. Sewell, Springfield; E. C. Bohrer, West Plains; Robert Mueller, St. Louis; Wallis Smith, Springfield; W. A. Bloom, Fayette; G. V. Stryker, St. Louis; R. E. Schlueter, St. Louis; Howard B. Goodrich, Hannibal; James R. McVay, Kansas City; Mr. W. H. Bartleson, Kansas City; John Williams, Jefferson City; Curtis H. Lohr, St. Louis; Carl F. Vohs, St. Louis; Everett D. Sugarbaker, Jefferson City; E. C. Ernst, St. Louis; Mr. George Larson, St. Louis; Llewellyn Sale, St. Louis; Mr. Raymond McIntyre, St. Louis; Mr. T. R. O'Brien, St. Louis.

A letter was read from a component society discussing a difficulty over fees in Workmen's Compensation cases. After discussion, it was decided to refer



this to the Committee on Medical Economics who should transmit information to the society on how to handle this on a local basis.

The letter services on medical interests in the national Congress were discussed including Marjorie Shearon, the Washington Reports on Medical Science and the Bulletin of the American Medical Association. After discussion it was decided to write to Dr. Lawrence suggesting that the style of the bulletins be changed so that material would be more readable and that important things would stand out by being on different colored stationery or some such way. Upon motion of Dr. Petersen it was voted not to subscribe to any of the services.

A form was presented which the Missouri Congress of Parents and Teachers asked to have approved for the examination of school children. After discussion in which it was brought out that the form was not the important thing but education of the people who go to the doctor with such a form that they receive a full examination, the form was approved temporarily upon motion of Dr. Kennedy.

A letter from Dr. J. Earle Smith and a resolution asking for representation of public health physicians on the Committee on Health and Public Instruction was read. After discussion as to whether appointing associate members to the committee would be the thing desired, upon motion of Dr. Petersen, it was left to the Chairman of the Council, the President and the Executive Secretary to work out and have power to act.

A component society asked for clarification as to dues of men now in military service. After discussion, upon the motion of Dr. Smith, this was referred to the Committee on Constitution and By-laws with the request that it obtain information as to how other states are handling this and report to the Council with recommendation.

Upon request of the Woman's Auxiliary the following Advisory Committee to the Woman's Auxiliary was approved: M. Pinson Neal, Columbia; W. L. Allee, Eldon; August A. Werner, St. Louis.

The rules of the proposed student loan fund of the Woman's Auxiliary were presented. It was thought that the clause concerning giving preference to a physician's family should be deleted and that a note should be signed at the time the student received the money. Upon motion of Dr. Mueller, the rules were approved with those two exceptions. It was also suggested that the Auxiliary be told that the Council heartily endorses this work. Loan funds in other states were discussed and it was suggested that some money be made available to the Auxiliary for this purpose. After discussion, upon motion of Dr. Petersen, it was voted to discuss this with the Woman's Auxiliary as to their wishes and that it be referred back to the council.

The Treasurer's report on the financial status of the Association was approved.

The present bill in Congress which includes physicians in the possibility of drafting was discussed. Dr. McVay pointed out that he felt this was based to some extent on the difference of opinion of the various surgeons general as to the number of physicians needed per 1,000 military personnel. Dr. Mueller explained that a precedent was set in the last war in which no physicians were inducted more than 38 years of age.

The vetoing of the recent bill clarifying the Cancer Commission's direct control of the Cancer Hospital was discussed. Upon motion of Dr. Virden, this was referred to the Committee on Cancer to study and work on with the Executive Secretary.

#### Sunday, June 6

Dr. Park White, St. Louis, presented a request that the Council approve and recommend to the Commit-

tee on Publication that the report of the survey conducted in Missouri by the Academy on Pediatrics be printed as a supplement to *THE JOURNAL*. Upon motion of Dr. Smith, this was referred to the Committee on Publication.

The following report on the program for the 1949 Annual Session was presented by Dr. Bloom: The Committee on Scientific Work met in May and has been in touch by correspondence since that time. The program for the 1949 Session already is shaping up well. As you know, cards were sent to all members asking for suggestions on the program. These were classified and the program planned is based on what the membership wishes. In the subjects in which requests predominated, symposia or panels have been arranged. Other subjects will be covered by individual papers.

An outline of the program as it is being worked out is: On Monday morning, a symposium on "Coronary Disease" which is being arranged in cooperation with the Missouri Heart Association; Monday afternoon will be individual papers on "Undulant Fever," "Psychomatic Medicine in General Practice," "X-Ray in the Diagnosis of the Right Upper Quadrant," and "Genito-Urinary Surgery."

On Tuesday morning a program of individual papers will be presented on "Modern Concepts of Tuberculosis," "Diabetes," "Caner of the Uterus" and "Gastric Pain" from the medical and the surgical standpoints. On Tuesday afternoon a panel on "Trauma" will be given, the panel to be made up of plastic surgeons, general surgeons, orthopedists and neurosurgeons.

On Wednesday morning a symposium on "Obstetrics" will be given which will be a little broader than the one this year, including pediatrics so far as the newborn child is concerned and more medical aspects.

In all subjects on which there is a committee of the Association or an active organization, selection of speakers has been discussed with them.

A letter from the state office of the Treasury Department U. S. Savings Bonds Division was presented asking that the Association cooperate in getting out a letter to members concerning the drive which will end June 30. Upon motion of Dr. Smith, it was voted to do this.

A letter from the American Association of Blood Banks asking to be endorsed by the Association was presented. The Red Cross program was discussed and it was pointed out that the A.M.A. had endorsed the Red Cross Program. Upon motion of Dr. Jolley, it was voted to appoint a committee which would study the situation of blood banks and report their finding to the Council. After considerable discussion, the question of the appointment of a committee to study the matter further was left to the discretion of the Chairman of the Council.

The two resolutions passed by the House of Delegates for presentation to the House of Delegates of the A.M.A., one concerning the A.M.A. discontinuing the use of Blue Cross and Blue Shield, the other the condemning of schools and hospitals practicing medicine as a corporation were discussed briefly. Dr. Schlueter and Dr. Goodrich requested that members from Missouri be present at the meetings of the reference committee to which these resolutions are referred and assist in getting action on them. Upon motion of Dr. Bloom, it was voted that the Council should in addition designate certain men to be present.

The divergence of medical testimony on the witness stand by different physicians was discussed. It was pointed out that in Minnesota and in Illinois plans had been worked out in conjunction with the Bar Associations which made for better medical testimony. Upon motion of Dr. Mueller, it was voted to appoint a committee, not necessarily from the Council, to study the situation on medical testimony in this state, probably in conjunction with the Bar Association, and recommend a plan for Missouri.





## The psychosomatic price

The tensions of modern living demand a price that is frequently gastrointestinal injury, occasionally peptic ulcer. The prevention and cure of peptic ulcer embrace the application of hygienic, psychiatric, dietary, and therapeutic techniques to this problem.

Logically, therapy should include the administration of materials which will tend to reduce the acidity

of the gastric content without producing alkalosis or other undesirable effects. Coincidentally, a demulcent effect should be sought to coat the ulcerated surfaces and protect them from erosion. *Lederle* research has found that a casein, low in sodium, high in calcium, in appropriate form, when given by mouth will accomplish these ends and provide the patient with prompt symptomatic relief.

**LEDERLE LABORATORIES DIVISION**

*AMERICAN Cyanamid COMPANY*  
30 ROCKEFELLER PLAZA • NEW YORK 20, N. Y.

Dr. Ernst reported that the cancer work in the state was progressing cooperatively and that initial efforts in the work would be made first in three localities: Cape Girardeau, Joplin and Springfield. Upon motion of Dr. Virden, it was voted that the Council approve the work and that it should transmit to the various centers that there has been proposed a clinic for that location and that the Council would like to have cooperation in starting this work.

Mr. McIntyre reported meetings held by county societies, groups of societies and councilor district meetings since the last Council meeting. He reported that a dinner meeting for interns and residents in Kansas City and St. Joseph has been held in Kansas City with much interest shown by the interns and residents present. It was decided that such a meeting should be held in St. Louis but that such meetings should be held earlier in the year.

Dr. Lohr reported that the present contract with the Veterans Administration expires June 30 and that a new contract had been submitted by the Administration. The Committee on Veterans Care had approved the new contract. Upon motion of Dr. Petersen, the Council gave authorization to signing the contract.

It was announced that the Council on Medical Service will meet in Chicago on June 19 and it was suggested that Drs. Vohs, Lockwood, Thompson and Virden attend this meeting. Dr. Vohs reported briefly on the recent meeting of the AMCP and Blue Cross in Los Angeles.

Dr. Williams asked the opinion of the Council on the use of the 70 mm. film alone or in connection with 14 by 17 films in suspicious cases. After discussion, upon motion of Dr. Virden, Dr. Williams was advised to use only the 70 mm. film which would increase possibility of coverage by 25 per cent and refer suspicious cases to the family physician. It was also agreed that county medical societies be advised to cooperate with the Division of Health in this work when possible rather than commercial x-raying.

The limited power of the Board of Medical Examiners in handling problems of unethical practice or even practicing without a license was presented by Dr. Goodrich. The problem of some unethical clinics practicing under the clinic name and not using a doctor's name was discussed.

Dr. Williams asked the Council if they wished a Central Registry on Tuberculosis established. It was decided that would be of no aid in combatting tuberculosis.

#### Meeting of September 25, 26

The Council met at the Sheraton Hotel, St. Louis, on September 25, 26 with J. W. Thompson, St. Louis, Chairman, presiding. Those present were H. E. Petersen, St. Joseph; W. F. Francka, Hannibal; J. W. Thompson, St. Louis; Otto W. Koch, Clayton; J. F. Jolley, Mexico; R. W. Kennedy, Marshall; W. S. Sewell, Springfield; E. C. Bohrer, West Plains; Frank W. Hall, Cape Girardeau; Robert Mueller, St. Louis; Wallis Smith, Springfield; C. E. Hyndman, St. Louis; W. A. Bloom, Fayette; R. E. Schlueter, St. Louis; W. L. Allee, Eldon; Howard B. Goodrich, Hannibal; Ralph E. Duncan, Kansas City; A. N. Altringer, Kansas City; M. Pinson Neal and Trawick H. Stubbs, Columbia; Llewellyn Sale, St. Louis; E. C. Ernst, St. Louis; Mr. D. E. Caywood, Springfield; W. H. Bartleson, Kansas City; Raymond McIntyre, and T. R. O'Brien, St. Louis.

The situation on the work toward a four year medical school was reviewed and it was announced that Dr. Stubbs, now Dean of the School of Medicine of the University of Missouri, would be present at the Council session. This was discussed by Drs. Thompson, Kennedy, Smith and Bloom.

Upon arrival, Dr. Stubbs was introduced to the Council by Dr. Neal. Dr. Stubbs spoke informally to the Council stressing the fact that the state is in need of

postgraduate education and suggesting that this could be worked out through hospitals throughout the state. He said in regard to the location of a possible four year medical school, that he felt the Board of Curators of the University thought the university would be weakened by placing a part or all of the medical school at another location. He said that the main purpose of the university, in any branch, was to serve the people and that if the Board of Curators and the medical profession could not come to some agreement that the serving of the people would suffer. He stressed again the enlarging of education at the graduate level and that that did not necessarily mean centralization but integration. This was discussed by Drs. Thompson, Altringer, Sewell, Francka, Petersen, Jolley, Bloom, Hall, and Mueller. It was the consensus of the Council that they would desire a conference with the Board of Curators if the discussion was not based on the definite location at Columbia.

The report of the Committee on Public Policy and Public Relations was read. It was requested that copies of this report be sent to Councilors and that action be delayed until the next meeting of the Council. It was pointed out that some of the work which the report called for immediately was being done as a routine procedure.

It was announced that Dr. Smith had been made chairman of a committee on clean streams and that several physicians in the state had been made members of the committee.

A resolution from the American Medical Association recommending that expenses of the Woman's Auxiliary be taken over, thus making dues in that organization unnecessary and automatically making every physician's wife a member was read. Upon motion, this was referred to the Woman's Auxiliary for their advice.

The problem of a laboratory in Kansas City which was not directed by a qualified person was presented and discussed. It was pointed out that the American Medical Association has stated that the practice of laboratory medicine is the practice of medicine. It was decided that the problem was really one of physicians referring work to these laboratories.

Mr. O'Brien read an announcement of a regional south central conference on medical service which will be held in Tulsa, Oklahoma, on November 13 and 14 and said that Missouri had been invited to be represented on the program. Upon motion it was left to the Chairman of the Council to handle.

The elimination of the office of coroner and the establishment of medical examiners was discussed. It was pointed out that this would take legislation and that it was understood that work on this is underway.

A letter and information was presented outlining a proposed organization of practical nurses and asking endorsement by the Council. After discussion it was decided that the Council should follow action by the Missouri State Nurses Association and action was delayed.

Mr. McIntyre reported on work in the various parts of the state since the last meeting of the Council. It was brought out that many societies are now consistently active and that meetings are being well attended. Councilor District meetings were announced, the Fifth District at Fulton on October 14; the Sixth District at Sedalia on October 18, and the Eighth District at Mount Vernon, October 21.

The Treasurer reported the Association in sound financial condition. Upon motion, his report was accepted.

Dr. Kennedy asked Mr. McIntyre to report on the newly formed Missouri Health Council. Mr. McIntyre told of the two organizational meetings last October and February and of a meeting in July when a constitution and by-laws were adopted and officers elected. He said the council would assist in the establishing of health councils in counties and proposed to set up a pattern



for local health councils. He pointed out that the state organization was purely a conference body but that the councils in the counties would be action bodies.

The program for the 1949 Annual Session was outlined as follows: Monday morning, March 28, a symposium on "Coronary Disease"; Monday afternoon a program on mixed subjects based on subjects suggested by members; Tuesday morning, another program of mixed subjects; Tuesday afternoon, a panel on "Trauma" and on Wednesday morning a symposium on "Obstetrics."

Dr. Francka reported for the Committee on Awards. He stated that since the time was short for the submission of names for the A.M.A. award to an outstanding general practitioner, the suggestion was made that each Councilor select a physician from his district for the Committee to select from. It was suggested that an award be given by the state to the person selected. It was recommended that each county be given opportunity of proposing a candidate for the lay award. It was recommended that each physician who has practiced fifty years in the state be presented an appropriate pin. Upon motion, the report was adopted.

Dr. Schlueter reported on the work that is being done in preparation for the Interim Session of the American Medical Association, giving the names of chairmen of committees and the subjects to be covered in the scientific session.

Mr. O'Brien announced a conference on public relations on November 27 and a secretaries-editors conference on November 28 and 29 in connection with the session.

Dr. Goodrich gave a thorough outline of the work done by the House of Delegates including action on the resolutions presented by Missouri delegates. He said that the reason given for the change of hospital and medical and surgical coverage from Blue Cross for A.M.A. employees was that there was not a society sponsored medical plan available. The result was that this coverage will be changed at the expiration of the present contract and that medical coverage will be available by that time.

Dr. Allee elaborated on this report and Dr. Schlueter discussed the resolution presented in regard to the practice of medicine by hospitals and medical schools. He read the recommendations of the Committee on Hospitals and the practice of medicine as follows:

"Because of the difference in the laws of the various states, your Committee recommends that the Bureau of Legal Medicine and Legislation of the American Medical Association be instructed immediately to make a study of the various state laws defining the legal status of corporations attempting to practice medicine in the various states, defining in each instance the differences in the various state laws concerned with this problem, and that, if necessary, legislation be prepared by the Bureau of Legal Medicine and Legislation which will define all of these matters so that uniform legislation to simplify legal interpretations may be prepared and supported by the American Medical Association to insure the legality of the actions taken.

"That the House of Delegates request the Board of Trustees to send within the next six weeks an official communication to medical schools and hospitals informing them of the principles and policies of the House of Delegates concerning the practice of medicine by institutions and stating that the American Medical Association will be glad to cooperate in every way with such institutions and appealing to them for immediate cooperation in the general over-all plan and for assistance in the preservation of the private practice of medicine."

Upon motion the reports were accepted with thanks and the Delegates were requested to introduce a resolution which would clarify attendance at executive sessions of the House of Delegates of the American Medical Association.

Dr. Sale, chairman of the committee to study the plans of other states in regard to medical-legal testimony, reported on the Minnesota Plan which was inaugurated in 1940 whereby a committee was set up by the Minnesota State Medical Association which would study transcripts of any testimony which was questioned. The committee has no jurisdictional power except to pass on the transcript to the board of medical examiners if it felt drastic action was needed; otherwise conferences with the physician testifying were held. He said that until 1943 the names of physicians whose testimony was being studied were made public but since that time the names had been withheld. In 1940 there were fifteen cases in Minnesota, in some years there has been none and so far in 1948 there have been two. The cost has been approximately \$500.00, this being mainly used in paying for the transcripts. Dr. Sale said that the committee in Missouri would work with the Bar Association and that a further report would be given.

Dr. Ernst, chairman of the Committee on Cancer, reported briefly on the work of the Missouri Division of the American Cancer Society. Mr. George Larson, executive secretary of the Missouri Division, was introduced to the Council.

It was asked that the agenda carry some notation concerning the items to be discussed.

The Community Health League was discussed briefly as to its continuance. It was the feeling that it should be continued and upon motion of Dr. Jolley it was voted to continue the Community Health League with closer cooperation between the League and the Council.

Dr. Mueller asked the approval of the Council in giving talks in the state against compulsory medical service. This approval was given.

#### Meeting of November 6 and 7

The Council met at the Muehlebach Hotel, Kansas City, on November 6 and 7 with J. W. Thompson, St. Louis, Chairman, presiding. Those present were Drs. H. E. Petersen, St. Joseph; W. F. Francka, Hannibal; J. W. Thompson, St. Louis; Otto W. Koch, Clayton; J. F. Jolley, Mexico; R. W. Kennedy, Marshall; C. Edgar Virden, Kansas City; W. S. Sewell, Springfield; E. C. Bohrer, West Plains; Frank W. Hall, Cape Girardeau; C. E. Hyndman, St. Louis; Robert Mueller, St. Louis; Wallis Smith, Springfield; W. A. Bloom, Fayette; Arthur Altringer, Kansas City; James R. McVay, Kansas City; Ralph E. Duncan, Kansas City; V. T. Williams, Kansas City; Mr. D. E. Caywood, Springfield; Mr. W. H. Bartleson, Kansas City; Mr. Ray McIntyre, and Mr. T. R. O'Brien, St. Louis.

Mr. McIntyre told of a meeting on October 25 sponsored by the Department of Agriculture on brucellosis and said that the department was going to attempt to obtain legislation which would assist in combatting the disease. Upon motion of Dr. Smith, it was voted that a committee be appointed from the membership of the Association to assist in this work.

The Council approved the placing of a wreath on the Beaumont grave by the President of the Association.

A program sponsored by the A.M.A. similar to the one held last year was announced and since a speaker from St. Louis appeared in the program last year, Dr. Virden was asked to select a speaker from Kansas City for this year's program.

Mr. O'Brien reported that several states had been contacted as to their handling of the dues of men in military service and they had handled it by action of their Councils rather than by change in the by-laws, all of them acting to remit such dues. On motion of Dr. Virden, it was voted that dues of men in military service be remitted, awaiting final action by the House of Delegates.

The report of the Treasurer was approved.

The following Committee on Budget was appointed: Drs. Hyndman, Petersen, Jolley, Virden and Thompson.

After discussion of the suggestion by the A.M.A. that the Association take over the dues of the Woman's Auxiliary, thus making every physician's wife automatically a member, and report of the suggestions of the Missouri Woman's Auxiliary, on motion of Dr. Virden, it was voted that the Association not approve the A.M.A. resolution and that the Auxiliary continue as at present.

A letter from the State Nurses Association saying that action of that body in endorsing the Missouri State Association of Practical Nurses would have to await their meeting was presented.

A communication from the Council on National Emergency Medical Service of the A.M.A. was read requesting that each state appoint a committee on National Emergency Medical Service. Upon motion of Dr. Smith, it was voted to do this. The chairman appointed the following committee: Drs. Mueller, Smith and Morris B. Simpson.

The recent meeting at French Lick of the Blue Cross and Blue Shield Commissions was discussed from several angles: the need for a national setup, the difficulty of some states coming under an insurance plan, the wishes of labor organizations in health matters, the plausibility of awaiting action of the House of Delegates of the A.M.A. before any final action is taken by the Blue Shield plans, the Blue Cross plans having approved the proposal presented. Upon motion of Dr. Virden, it was decided that Missouri delegates to the House of Delegates of the A.M.A. should be fully informed on the problems before they go into the House discussion and that they should proceed on this prior information, based on the discussion brought out in the House of Delegates.

Mr. McIntyre reported on activities of component societies and Councilor Districts in the last month, reporting a listing leaving five days on which there were no meetings but in several cases several societies had meetings on the same date. He pointed out that the Committee on Postgraduate Course was active in supplying speakers for these meetings.

Mr. McIntyre also gave a detailed report on the number of hospitals or additions to hospitals under construction in the state.

The Committee on Awards announced that Dr. Harry Barron, Fredericktown, had been selected for nomination to the American Medical Association for the Outstanding General Practitioner Award. The committee recommended that a definite set of rules for such selection be set up based on those of the A.M.A. and that hereafter a secret committee make the nomination. It also was agreed that in future years the recommendations should be made by August 1.

A letter from Dean Stubbs was read saying that a date for a meeting with a committee from the Board of Curators would be suggested soon.

Upon motion of Dr. Mueller, the Committee on Rural Health was allowed funds needed for contacting interns and residents in St. Louis and Kansas City through a dinner meeting similar to the one held in Kansas City last spring.

Dr. Virden presented Dr. John Knight, Kansas City, who presented the following reiteration of the policy of the Association on health for the people.

"Recognizing the responsibility of the medical profession in assuming leadership in planning for improved medical and hospital service to the people of Missouri, the Council of the Missouri State Medical Association offers a six point program to meet the needs of the citizens of the entire State of Missouri.

"In presenting this program to the people of Missouri the Missouri State Medical Association believes that not only will it improve the health, social status, and economic structure of the state but that it will result in achieving a closer relationship within the

State of Missouri of all organizations that are participating in medical and health care, whether private or publicly supported. These agencies all joining together in a correlation of programs and plans will result in an improved health program in Missouri which will include not only care for the sick but an educational program in preventive medicine and patient care. These preventive and educational programs can be accomplished along with the expansion of hospital facilities and if an increased number of doctors are available for service within the state.

"The Missouri State Medical Association presents the following six point program for the improvement of the health and welfare of all the people of Missouri.

"Point One: More hospital beds and hospital facilities are needed in strategic localities throughout the state. The medical profession cooperated in working for the passage of the Hospital Survey and Construction Act for Hospitals. Following enactment of this legislation the State of Missouri became eligible to participate in grants under the Hill-Burton Act, which provides one third of the cost of construction for hospitals, where such hospitals are approved under the program.

"The Missouri State Medical Association urges communities throughout the state to avail themselves of the grants offered under the Act in meeting the need for hospital beds in rural areas. During 1948 a total of \$2,282,550 in federal money was made available in Missouri for the improvement and construction of hospital units.

"United community action of all groups is necessary to solve the hospital bed shortage in rural areas. The task of meeting the requirements of the provisions under the Hill-Burton grant is a local one, and the Missouri State Medical Association offers its full support to communities in working out plans.

"Point Two: Prepaid hospital and surgical care benefits are sponsored by the Missouri State Medical Association to protect the average family in case of serious and lengthy illness. Financial worry over unexpected hospitalization retards recovery.

"Group Hospital Service, a Blue Cross Service, was started in St. Louis in 1936 and this plan now covers about two thirds of the state with 101 member hospitals. From an enrollment of 8,114 at the end of the first year this plan has grown to a total of 819,928 participants. The Group Hospital Service was started through the efforts of the medical profession to work out a nonprofit community program for prepayment of hospital costs.

"The Missouri Medical Service was organized in St. Louis in April, 1945, to provide for payment of certain general surgical services, medical and other diagnostic procedures. At the end of the first year a total of 29,153 persons was enrolled and the participants are limited to employed groups of persons covered under the Blue Cross Plan and their dependents.

"The Blue Cross Hospital Service Plan was inaugurated in Kansas City in 1938 through the untiring efforts of the medical profession. At present there are 247,967 persons enrolled in this plan which covers the western part of Missouri. Since May, 1938, a total of 113,001 patients have received benefits under the plan with a total expense of \$5,371,992.

"Surgical Care, Inc., was organized in Kansas City in June, 1943, as a nonprofit prepayment medical care plan. This program covers the metropolitan areas of Kansas City and the nineteen northwest counties. Under this plan 65,233 members have received care at a cost of \$2,243,266.

"These nonprofit plans offer protection to Missouri families in case of serious and lengthy illness.

"Point Three: Increasing the programs of the Division of the Department of Public Health and Welfare in the interest of preventive medicine, public health education, maternal and child welfare programs is recognized by the Missouri State Medical Association as ex-



whenever  
possible . . .

BREAST FEEDING

as long as  
possible . . .

or

# SIMILAC

so similar to human breast milk  
that

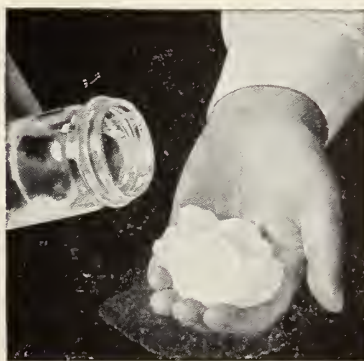
*there is no  
closer  
equivalent\**

- \* Similac protein has been so modified
  - \* Similac fat has been so altered
  - \* Similac minerals have been so adjusted
- that*
- \* There is no closer approximation to  
mother's milk.

curd of Similac —  
0 grams  
truly a fluid food



curd of breast milk —  
0 grams  
truly a fluid food



curd of  
powdered milk  
especially prepared  
for infant feeding —  
12 grams

SIMILAC DIVISION • M & R DIETETIC LABORATORIES, INC.

COLUMBUS 16, OHIO

tremely important to the people of the rural areas. Increased appropriations by the General Assembly for expanding the programs of this department have been supported by the Missouri State Medical Association. The establishment of the Division of Health in the revision of the statutes under the new constitution as a part of the Department of Public Health and Welfare was accepted as an obligation of the Missouri State Medical Association to aid in whatever way it could be helpful to the members of the General Assembly and the Governor of the state in the recommendations for the laws that were enacted.

"The Missouri State Medical Association has observed increased aid from appropriations for the aid of this department and the extension of its activities in the interest of health of the people.

"Point Four: The need for improvement in the facilities of the state hospitals operated for the benefit of sick people and the need for obtaining more professional personnel has been recognized by the Missouri State Medical Association. They have urged the financial aid and administrative changes which would produce better medical care and services for the people of Missouri and especially those who are patients in these hospitals.

"The Governor of the state recognized this need and likewise did the 64th General Assembly. Following the recommendation of the Governor a special committee of the House of Representatives was appointed who made an investigation of the hospitals. Following their investigation, legislation was introduced that resulted in appropriations of funds for improvement of the physical facilities and the employment of more professional personnel.

"The Missouri State Medical Association recommends that these improvements be continued and advocates that further support be given by the state to improve the state hospitals for the benefit of the people of Missouri.

"Point Five: The Missouri State Medical Association fully realizes that the building of additional medical facilities, and the prepayment of medical costs is of no avail to Missourians unless there are doctors to care for the patients. With the realization that more doctors of medicine are needed in rural Missouri the Missouri State Medical Association advocates increasing the Missouri University Medical School to a four year medical school so Missouri youth may have the opportunity of completing their medical education at their own State University.

"In sponsoring the education of doctors the Missouri State Medical Association believes that every citizen of Missouri studying medicine should be afforded equal opportunities of completing their education at the State University, as those afforded to students pursuing other professions. Missouri needs doctors, yet graduates of the two year medical school at the University of Missouri must pay the increased costs to attend private medical schools, or pay large out-of-state fees in other state universities offering the final two years. We believe that the youth of Missouri studying medicine should be offered opportunities comparable to what other state universities offer their residents.

"Experience in other states has proved that state universities educating doctors from rural areas have found that many of these doctors return to their own area to practice.

"The Missouri University School of Medicine, recommended by the Missouri State Medical Association, must be a school of medicine that meets the requirements of all the accrediting authorities.

"The school must have a full and complete staff of instructors who are properly qualified by education and experience which shall include both the full time staff as well as practicing physicians teaching part time. The curriculum and standards of the school must be main-

tained at a level so the graduates are eligible for examination and licensure in all states.

"The school must afford the student the opportunity in medical education to see and observe all types and kinds of ambulatory clinic patients as well as those hospitalized and available for teaching purposes including both acute and chronic. The clinical years in medical school are of utmost importance in the completion of the medical education. Hospital and medical school authorities agree that an outpatient clinic department must have a minimum of at least 60,000 patient visits a year to be satisfactory for teaching purposes.

"The school of medical education must be located not only where clinical material is always available, but in an area where the student doctors have the opportunity of attending scientific medical meetings and have access to suitable medical library facilities. The students should also have the opportunity of serving as externs in private hospitals and of attendance at the private hospital scientific programs.

"Point Six: Scholarships and financial assistance should be available to men and women of Missouri who desire to study medicine at the State University. Medical Education scholarships are sponsored by the Missouri State Medical Association through the Woman's Auxiliary.

"Of great benefit to rural areas would be scholarships worked out on a community or trade territory basis for financial assistance to local young men and women who desire to study medicine at the State University and who plan to return to their own communities for practice. Civic clubs and citizens of local communities could band together in educating promising youth of their own particular areas.

"Farm organizations cognizant of the needs of rural areas could well be the sponsoring group to assist with financial help in the education of farm youth desiring to pursue medicine, but unable to do so because of financial reasons.

"Scholarships provided for by enacted legislation of the General Assembly could be divided through various state areas.

"The Missouri State Medical Association stands ready to offer its service to any group within the State interested in working out a scholarship plan."

Upon motion of Dr. Virden, this was accepted and approved as corrected.

Upon motion of Dr. Mueller, it was voted that this be sent to all members of the Association.

Upon motion of Dr. Mueller, the report of the Committee on Public Policy and Public Relations was accepted and approved in principle and with some recommendations held for further consideration.

The following resolution was presented and upon motion of Dr. Mueller, it was voted that this be presented to the House of Delegates by the Missouri delegates:

WHEREAS, At the last annual session of the House of Delegates of the American Medical Association held in Chicago considerable time was consumed discussing who besides officially seated delegates should be allowed to sit in executive sessions in the House of Delegates, and

WHEREAS, The time so consumed served no good purpose and was a complete loss to both the American Medical Association and the delegates in session, and

WHEREAS, The chief officers of the constituent state medical associations are in close touch with the problems of their respective state associations and are vitally interested in the proceedings of the House of Delegates, and

WHEREAS, A definite clarification or change in the by-laws of the association could eliminate this unnecessary time consuming discussion, therefore be it

Resolved, That the House of Delegates either recommend to the speaker for his action or vote a change in the by-laws that presidents, executive secretaries and



chairmen of the executive councils of the constituent state medical associations be allowed to sit with the officially seated delegates at the executive sessions of the House of Delegates, and that these officers of the constituent state medical associations be given credentials by their state associations and be registered at each session of the House of Delegates with the credentials committee and be given appropriate identification insignia that can be readily recognized by the Sergeant-at-Arms and that a portion of the auditorium be marked off where these visitors may sit apart from the official delegates.

It was reported that the Crippled Children's Service would lack funds after the first of the year and upon motion of Dr. Jolley, the President was instructed to write to the Board of Curators of the University requesting that they ask funds from the Legislature upon its convening the first of January.

The following budget presented by the Budget Committee was accepted for presentation to the House of Delegates:

Salaries .....	\$25,800.00
Journal Expense .....	16,000.00
Postage and Express .....	1,000.00
Printing and Stationery .....	2,000.00
Travel, Executive Secretary .....	1,200.00
Travel, Field Secretary .....	2,000.00
Telephone and Telegraph .....	1,000.00
Office Rent and Light .....	2,800.00
Meetings, Committee Expense .....	12,000.00
Defense .....	500.00
Postgraduate .....	1,000.00
Woman's Auxiliary .....	500.00
Public Relations .....	4,500.00
Insurance Annuity .....	950.00
Miscellaneous-General Expense .....	2,000.00
Furniture and Fixtures .....	500.00
Social Security Tax .....	175.00
Total .....	\$73,925.00

Dr. Virden was thanked for the hospitality extended the members of the Council.

#### Meeting of January 15, 16

The Council met at the Sheraton Hotel, St. Louis, on January 15, 16, with J. W. Thompson, St. Louis, Chairman, presiding. Those present were Drs. H. E. Petersen, St. Joseph; W. F. Francka, Hannibal; J. W. Thompson, St. Louis; Otto W. Koch, Clayton; J. F. Jolley, Mexico; R. W. Kennedy, Marshall; C. E. Virden, Kansas City; E. C. Bohrer, West Plains; Frank W. Hall, Cape Girardeau; Robert Mueller, St. Louis; Wallis Smith, Springfield; C. E. Hyndman, St. Louis; R. E. Schlueter, St. Louis; R. E. Duncan, Kansas City; B. Landis Elliott, Kansas City; B. E. DeTar, Joplin; Mr. D. E. Caywood, Springfield; Mr. W. H. Bartleson, Kansas City; Mr. T. R. O'Brien, St. Louis; Mr. Ray McIntyre, St. Louis.

The minutes of the last meeting were approved as published in THE JOURNAL.

Upon request for clarification by the Jackson County Medical Society, it was decided that junior members who finish an internship or residency in the middle of the year would be carried through the year on junior dues.

Mr. O'Brien informed the Council that the Missouri State Nurses Association had endorsed the Practical Nurses organization and that the latter group had been notified of the endorsement by the Missouri State Medical Association.

A letter to Dr. Virden from the Jackson County Woman's Auxiliary requesting \$200.00 to apply on expenses of their entertainment for the Annual Session was presented. Upon motion of Dr. Koch, it was agreed to grant the request.

The Treasurer reported that the finances of the Association were in good shape and that every effort was being made to have the books audited in time for publication before the Annual Session.

Two meetings of a committee of the Council with a committee from the Board of Curators of the University of Missouri and with the full Board were reported on by Drs. Virden, Smith, Mueller and Thompson. It was brought out that at the first meeting it was agreed upon that there should be a four year undivided school. At the second meeting the facilities offered by Kansas City were presented to the Board. It was announced that Mr. Roscoe Anderson, a member of the Board, would appear before the Council giving the answer of the Board.

Mr. McIntyre reported on the work with county medical societies throughout the state showing continued activity of the various societies and councilor districts. He announced the fourth annual Rural Health Conference to be held in Chicago, February 3, 4 and 5. He reported that Greene County was beginning a series of Health Forums under the auspices of the Committee on Public Health and Instruction. He also announced a dinner meeting and panel discussion for interns and residents to be held at St. Louis Medical Society on February 21.

A résumé of the events and the scientific program were presented, as will appear in the February issue of THE JOURNAL. Upon motion of Dr. Smith, \$1,000.00 was placed at the disposal of the Jackson County Medical Society for entertainment during the Session. Upon the request of Dr. Duncan and on motion by Dr. Mueller, Dr. Virden was asked to invite Mayor Kemp of Kansas City to give the welcoming address at the Session.

Dean Trawick Stubbs, Dean of the University of Missouri Medical School, and Mr. Roscoe Anderson of the Board of Curators were guests of the Council at lunch. Following lunch, Mr. Anderson gave the following report:

"The Board of Curators of the University and administrative officers including the Dean of the School of Medicine, are still strongly of the opinion that if a four-year medical program is established under the supervision of the University it must be located on the campus at Columbia, and they further believe that it is their responsibility to decide the place where this medical instruction should be given. The Curators wish to make it clear, however, that they respect the opinions and arguments of those who want the school located elsewhere.

"Recognition of Columbia as a location for a State hospital and medical center has been given by the Missouri State Division of Health. This agency which conducted a survey of the State in compliance with Public Law 725 submitted a plan which divides the State into four regions for the purpose of providing medical facilities and hospitals to the people of Missouri. The plan recommends that the Northeast region have Columbia as its base area with centers of four intermediate areas located in Kirksville, Hannibal, Boonville, and Jefferson City.

"The contributions that doctors can make to medical education are many. Their help is needed in working out the details of building the additional two-year program. If the board can call upon them for assistance and tap the wealth of their experience as students and practitioners of medicine, it can build a school which will be a credit to the medical profession and one which can render the highest type of service to the people of Missouri.

"By offering the four years of medicine as a single unit on a campus which is in a rural and centrally located city, the University would be better able to integrate medical education with the sciences and humanities and to coordinate its research and classroom instruction with a state-wide program of health

and medical care which could give special attention to the needs of rural Missouri.

"It is also believed that by locating the school in Columbia it would be possible to help solve the problem of providing doctors for the rural areas, where there is an acute shortage.

"Good principles of administration demand that the four years of medical instruction be given in one place. Also it would be more economical to do so and since the costs of medical education are extremely high the board feels that this is a serious consideration. A united school would make possible the building of an able faculty and a strong curriculum.

"Only by having the four year medical course at Columbia may the fullest development of a program of medical and health extension service, with particular emphasis upon rural areas, be developed. The intimate contacts with rural Missouri built up for the University by the College of Agriculture would make a medical school at Columbia more conscious of rural problems than a medical school located in a distant city.

"The training of doctors at a medical school in a University community the size of Columbia will be far more conducive to their settlement in rural areas than if they are trained at a medical school located in a large city.

"The central location of Columbia and its excellent highway connections with rural Missouri make it the most logical and convenient location for a medical center for rural Missouri.

"With the existing University hospitals, the Cancer Hospital, the Crippled Children's Service, the physical plant of the present two year medical school, sites for the expansion of these facilities already acquired, the State already has made a large investment for medical facilities at Columbia. These State hospital facilities already in Columbia provide 250 beds available as teaching hospitals for the last two years of medical study in Columbia. Furthermore, within radius of 30 miles from Columbia the State has other large institutions at Fulton and Jefferson City which could easily supply considerable clinical material for the medical school.

"The State Hospital No. 1 at Fulton has 2,852 beds and the hospital of the State Penitentiary at Jefferson City has 203 beds. In addition, county and other local hospitals in Columbia, Jefferson City, Fulton and Booneville provide possibilities of more clinical material for use of the School of Medicine.

"The University location presents to the faculty and students of medicine the invaluable asset of close contact with the fundamental sciences of physics, chemistry, and biology and the related sciences of psychology, anthropology, and sociology. To have the libraries of these sciences available for reference by teachers of the medical sciences is most desirable; but the opportunity to consult with the professors in these sciences is equally important. Many of the great advances in medicine have come not from the practicing physician but from physicists, chemists, biologists, and other scientists. Conversely, the medical sciences frequently throw important light on many lines of work in other fields of science of great value to the State.

"The University location develops the educational interrelationships of the medical division. There is also the question of the educational interrelationships of the medical division with other professional schools, such as law, veterinary medicine, business and public administration, social service, agriculture and education. These relationships are of practical significance in the development of special programs within the University for newer fields auxiliary to medicine, for such vocations as laboratory technology, dietetics, medical record, library service, social welfare, physical

therapy, occupational therapy, and hospital administration.

"A more specific enumeration of the ties that the School of Medicine has with other divisions of the University would include:

"1. One of the most significant ties that we have at the University of Missouri is the College of Agriculture, and it is worth going into some detail as illustrating the interdependence of divisions of the University, in teaching and research. The College of Agriculture is carrying on very successful investigative work in the diseases of animals, fowls, plants, and insects (as carriers of disease); the relation of soil to the health of animals and man; and the dissemination of knowledge of sanitation, hygiene, and personal health, to the people of Missouri, through its Extension Division.

"It is generally known that the University of Missouri College of Agriculture is one of the best in the country, and the investigative work now going on in this division is of great medical interest. The clinical years of medicine could benefit from these discoveries and, in return, collaborate with and add to this investigative work.

"There is an exchange of scientific knowledge and cultural interest that has grown up between the portion of the Medical School that we now have, and the College of Agriculture. The animal husbandry department has investigators and teachers who are taking part in biochemistry seminars. Medical bacteriology and endocrinology seminars are held in the School of Medicine. Personnel from the School of Medicine and the department of animal husbandry exchange ideas and compare research data in these seminars. In addition, graduate students in the School of Medicine have contact with the men in the College of Agriculture who are authorities in fields like endocrinology, and graduate students in the College of Agriculture have contact with specialists in the School of Medicine.

"The development of a four year School of Medicine would create even a greater interdependence of specialists in both schools, and a greater mutual cooperation, all of benefit to the state.

"2. The teaching of sanitary engineering in the College of Engineering, with its investigations on the control of water supplies, disposal of sewage for rural homes and municipalities makes close connection with a medical school highly desirable.

"3. The teaching of personal hygiene and the training of teachers of hygiene in the School of Education are aided by associations with a medical school.

"4. The teaching of legal medicine in the School of Law makes use of medical school staff and facilities.

"The Board of Curators is convinced that the expansion of the University School of Medicine should be coordinated with a state-wide program of health and medical care, with special attention to the needs of rural areas. If the four year medical program is re-established at Columbia, the University can, through its central position in the State, incorporate into its structure the modern ideas of the public health obligations that a state-supported medical school owes to the people of the state.

"In such an integrated program, the course of study should be based upon the standard one, but there should be certain departures from the traditional medical course, which can be made successfully only if the medical school is developed on the University campus.

"Some of these departures would be:

"(1) The inclusion in the curriculum of 'preceptor' courses which would be given in an extra period of three months during the student's fourth year. Senior students enrolled in these courses would be apprenticed to competent physicians in the smaller communities of the State, so that the students would gain



some experience in the actual practice of medicine.

"(2) A program of short postgraduate courses and refresher courses planned to meet the needs of practicing physicians of the State.

"(3) An extension service patterned after the Agricultural Extension Service which would carry the modern facilities in medicine to every rural community in which they were not otherwise obtainable. This service would work through the local doctors, the public health nurses, and the county courts. It would act only as a help to the local physician, giving such aid and council as he might request.

"(4) The establishment and operation of adequately equipped mobile laboratories to be used throughout the State for the benefit of, and in cooperation with, local health officials in their public health work and local practicing physicians in holding various types of clinics.

"The expansion of the existing University hospital facilities which would be required if the third and fourth years of medicine were re-established would include not only the building of a state teaching hospital but also a small hospital especially designed for the Crippled Children's Service. The plan of operation of the State General Hospital would be so designed as not to interfere with the relationship of any county or private hospital with its county court. It would provide the means of offering the medical profession of the State those hospital services in the special branches of medicine and surgery that are not available in the small community hospitals. These services would also be offered to physicians whose patients could not afford them even if they were locally available."

Upon motion of Dr. Smith, the following was passed: First, that there be a four year course in medical education sponsored by the University of Missouri; second, that complete information of factual nature be submitted to the Board of Curators and members of the General Assembly as to the costs of the original construction as well as the annual costs of maintenance, whether the entire school be located at Columbia or Kansas City.

Dr. Schlueter reported on the Interim Session of the A.M.A. speaking especially of the assessment placed by the A.M.A. on every member, giving the background of the change in the by-laws which made this possible and reviewing the minutes of the House of Delegates in regard to it at the Interim Session. Upon motion of Dr. Virden, it was voted that the Association set up separate space and that separate bills be sent and that it be kept entirely separate from the annual dues of the Missouri State Medical Association.

The change in by-laws of the A.M.A. setting the terms of state delegates as beginning with January 1 of each year after the delegate is reported to the A.M.A. was explained. It was pointed out that this would make a change in the serving of Missouri delegates since the delegates elected in March or April could not begin serving until January of the next year. Upon the suggestion of Dr. Schlueter, it was decided that a committee should study this, reporting to the Council at the meeting in connection with the Annual Session and then the Committee on Nominations be fully instructed of the change.

The suggestion for consideration by the Council for changing the election of councilors so that those in the east part of the state be elected when the session was in St. Louis and those in the west part when the session was in Kansas City was discussed. It was decided that no change should be made since the problem was one of electing delegates who would attend the session regardless of distance.

The possibility of an interim session as proposed in the House of Delegates was discussed. It was decided that it was better not to change the by-laws and make such a meeting mandatory since a session can be held

according to the present bylaws by a petition by twenty delegates or by two thirds vote of the Council.

The amendment to the Constitution which was laid over from the last session for action at the coming meeting in which the word "white" is deleted from the membership requirements was called to the attention of the Councilors.

Dr. Elliott discussed the desirability of the Constitution and by-laws being rewritten. Upon motion of Dr. Peterson, the Committee on Constitution and By-Laws was instructed to employ an attorney and any other help necessary for assistance and that the Committee rewrite the Constitution and By Laws.

The Committee on Awards reported, stating that the Committee was divided in its opinion. After considerable discussion in which it was brought out that more definite requirements should be set up as to type of service rendered and whether on state or national scale, upon motion of Dr. Virden it was decided that no award be made at this time and that letters be sent to a number of people whom the Councilors suggest as having done outstanding things for the health of their communities.

After discussion, upon motion of Dr. Virden, it was decided that a list of qualified men for the position of Health Commissioner be submitted to the Governor.

The work and personnel of the Hospital Advisory Council was discussed and upon motion of Dr. Smith, it was decided to recommend to the Governor that the Council be reappointed.

The State Cancer Hospital was discussed from the standpoint of control by the Cancer Commission. After discussion, upon motion by Dr. Jolley, it was decided that it be recommended that the Cancer Commission be reestablished as the controlling body of the State Cancer Hospital. It was suggested that conference be held with Dr. Ernst concerning this.

Dr. Virden stated that the Missouri Chapter of the Cancer Society was about ready to commence cancer programs in rural areas.

Dr. Mueller reported a letter from Governor Smith asking that a committee be appointed to study the treatment at the mental hospitals in the state. Dr. Mueller said a committee composed of Drs. Walter L. Moore, St. Louis; B. Landis Elliott, Kansas City; and Robert J. Mueller, St. Louis, had been appointed.

A letter was read from the A.M.A. regarding action of the House of Delegates reiterating its condemnation of rebates and urging that legislation be introduced by the various states against rebates and that county societies check their own members. Upon motion of Dr. Peterson, this was referred to the Committee on Public Policy and Public Relations.

Copies of a bill prepared by the Missouri Hospital Association for the purpose of licensing and inspecting hospitals in Missouri was presented to the Council. After discussion, upon motion by Dr. Virden, it was decided that this legislation should be endorsed by the Missouri State Medical Association.

Upon motion of Dr. Mueller, the Council approved Mr. McIntyre assisting the Academy of General Practitioners when it was possible in connection with his work as Field Secretary.

It was pointed out that the Committee on Rural Health had been active in the hospital survey and the report had been placed in the hands of that committee.

The qualifications of speakers on legislation pertaining to medicine was discussed. It was pointed out that county societies should know that a physician knew his subject and could speak authoritatively before he is assigned to any speaking engagement.

Upon motion of Dr. Mueller, it was decided to continue the monthly column, "Medical Sidelights."

It was decided that the appropriation for public relations be used in preparing the factual material

on the four year medical school and that it be left to Mr. O'Brien what outside help is needed in preparation.  
J. W. THOMPSON, Chairman.

DR. THOMPSON: The American Medical Association on February 11, 1949, officially adopted a twelve point program. This program was then presented to representatives of all state medical associations. It is a good program and all state and county medical societies are expected to implement it.

The Missouri State Medical Association has gone on record and the Council urges the House of Delegates to reaffirm its stated policy, doing everything possible to furnish the best medical care possible to all the people in Missouri. At the same time the Council urges the House of Delegates to approve officially the twelve point program and to advise our representatives in Congress of this action. The following projects have been continuing projects of the Association for many years. The Council wishes at this time to call attention to them and to the work of the committees involved.

**Voluntary Insurance.** The Blue Cross and Blue Shield Plans in Missouri have been in existence since 1935. The Report of the Committee on Medical Economics, published in the Reports of Officers and Committees, indicates the extent of enrollment in these plans. The Council urges the House of Delegates to inform the management of these plans in Missouri that we are squarely behind them, that the members of the Missouri State Medical Association will do everything possible to assist them in enrolling more persons in our state.

**Facilities.** The Council of your State Medical Association is aware of the lack of facilities, especially hospitals and health centers in Missouri, and strongly urges that the people of Missouri, at the local level, avail themselves of the federal grants under the terms of the Hill-Burton Act. Progress is being made at this point. The report of your Committee on Rural Medical Service indicates the extent of the construction program that is already under way. Dr. Williams has just informed you.

**Public Health.** For many years this Association has supported the activities of the state and local health departments. These departments need additional funds to carry on their educational and disease control programs. Your Council respectfully urges the House of Delegates to go on record as favoring public health work in this State in cooperation with the Missouri State Medical Association.

**Mental Hygiene.** The Association has actively supported the Governor and the legislature of our state in the various suggested programs to improve mental health. At the present time a special committee appointed by the President is investigating the mental hospitals at the request of Governor Forrest Smith. Additional information will be found in the report of the Committee on Mental Health.

**Health Education.** The Committee on Health and Public Instruction has been providing speakers on health educational subjects for several years. Your Council respectfully urges that the work of this committee continue at an accelerated rate so that the people may be informed of the available facilities and their own responsibilities in health care.

**Industrial Medicine.** Your Committee on Industrial Health has been working on a most important project for several years. This project is to have the medical schools of our state teach industrial health as a part of the regular curriculum. This will begin at St. Louis and Washington Universities in October.

**Rural Medical service.** Since the end of the war, the Association, has, under the direction of its Committee on Rural Medical Service, provided a Bureau of Information. This bureau has endeavored to assist in helping doctors to find suitable locations in our state, as well as acting as a clearing house for communities which write us to find medical personnel for

them. Two hundred and ninety-one physicians have located in various places in rural Missouri since the end of the war. Further information will be found in the Report of the Committee on Rural Medical Service.

This report and recommendations, I think, show the splendid cooperation that component committees and the Council of this Association have been giving to carry on the policies of this House of Delegates. There is a resolution which, this morning, had the unanimous approval of the Council:

WHEREAS, There has been for several years a constantly growing threat to the voluntary method of rendering medical care to the people of the United States, and

WHEREAS, The people of the United States and the medical profession rightfully look to the American Medical Association for leadership in matters pertaining to medical care and the welfare of both the people and the profession, and,

WHEREAS, The American Medical Association has, by action of its House of Delegates at the Interim Session, launched a campaign to educate the public concerning medical care, and,

WHEREAS, Its program involves the support of individual physicians, both in spirit and financially, as to the assessment of \$25.00 a piece, on each member; therefore be it

Resolved, That the House of Delegates of the Missouri State Medical Association heartily endorses the program of the American Medical Association and offers its support, both in spirit and in urging members to comply with the assessment, and, be it further

Resolved, That a copy of this resolution be sent to the Board of Trustees of the American Medical Association, the Speaker of its House of Delegates, the Chairman of its Coordinating Committee, members of the House of Delegates of the American Medical Association, and to all Missouri members of the United States Congress.

Upon motion, duly seconded, the resolution was adopted.

#### **Appointment of the Committee on Nominations**

The President announced the appointment of the Committee on Nominations as follows:

Carl F. Vohs, St. Louis, Chairman.  
Donald M. Dowell, Chillicothe.  
B. L. Murphy, Hannibal.  
C. P. Dyer, St. Louis.  
W. J. Shaw, Fayette.  
C. Braxton Davis, Nevada.  
A. N. Altringer, Kansas City.  
Durward G. Hall, Springfield.  
Garrett Hogg, Jr., Cabool.  
W. O. Finney, Chaffee.

**SPEAKER:** We will proceed to Unfinished Business. There is a Constitution amendment, submitted by Dr. Park J. White, St. Louis, to amend Article IV of the Constitution by eliminating the word "white" from line 3 so that the Article when amended will read: The Association shall consist of members who shall be members of the component county medical societies to which only physician shall be eligible who have been certified to the headquarters of this Association and whose dues and assessments for the current year have been received by the Secretary.

The amendment was carried by a vote of 60 to 18.

**SPEAKER:** The matter of a change in Councilor Districts was referred to the council last year for recommendation to this House of Delegates. The recommendation is contained in the report of the Council; that is, that there be no change in that delegates, when elected, should assume the responsibility of attending the session.

Upon motion, duly seconded, the recommendation of the Council was accepted.

**SPEAKER:** A resolution to have an Interim Session was referred to the Council for recommendation. The Council has recommended that since a two third vote of the Council or twenty delegates could call for a special meeting, that it was not necessary to take special action on an Interim Session

Upon motion, duly seconded, the recommendation of the Council was accepted.

Upon motion, the following resolution, adopted at the



microcrystalline | microcrystalline | microcrystalline | with  
**SULFADIAZINE | SULFAMERAZINE | SULFAMETHAZINE | SODIUM LACTATE**

*Another Central First!*  
 TRIPLE-SULFA COMBINATION  
**TRISULFAZINE**  
*Suspension* Trademark  
 with SODIUM LACTATE

**EFFECTIVENESS**

RAPID  
 ABSORPTION

**SAFETY**

MINIMAL  
 TOXICITY

**CONVENIENCE**

LIQUID  
 FORM

**PALATABILITY**

PATIENT-  
 ACCEPTANCE

**TRISULFAZINE\*** Suspension with Sodium Lactate contains *sulfadiazine*, *sulfamerazine*, and *sulfamethazine*, recently described<sup>1</sup> as an advantageous combination of sulfonamides for increased safety and satisfactory clinical effectiveness, plus the added safeguard, *sodium lactate*, which, because of its alkalinizing action, increases the solubility of the sulfonamides and reduces still further the possibility of crystalluria and renal damage.

**FEATURES:** • Intensive dosages feasible  
 • Minimal danger of crystalluria • Reduced need for adjuvant alkali or fluid administration • Well suited to pediatric or geriatric use.

Each fluidounce contains: 1 Gm. each sulfonamide (microcrystalline) with 3 Gm. sodium lactate, as a stable suspension in an agreeably flavored vehicle.  
 SUPPLIED: Bottles of 2 oz., 1 pt., 1 gal.

**OTHER COUNCIL-ACCEPTED DOSAGE FORMS:**

**TRISULFAZINE Tablets:** 0.166 Gm. each sulfonamide. | SUPPLIED: Bottles of  
**TRISULFAZINE Palatabs\*:** 0.083 Gm. each sulfonamide. | 100, 500, and 1,000.

THE FIRST TRIPLE SULFA COMBINATION ACCEPTED BY THE  
 COUNCIL ON PHARMACY AND CHEMISTRY

1. Flippin, H. F., and Bager, W. P.: *Virginia M. Monthly* 76:56 (1949).

\*Trademark of The Central Pharmacal Co.

THE CENTRAL  
 SEYMOUR



PHARMACAL CO.  
 INDIANA

Pharmaceutical Progress Since 1904

90th Annual Session, was referred to the Reference Committee on Resolutions:

WHEREAS, There is an ever increasing tendency on the part of hospitals and medical schools throughout the United States to engage in the practice of medicine for profit, and

WHEREAS, This corporate practice of medicine is a professional evil, second only in its consequences to socialized medicine, and

WHEREAS, Such practice constituted not only exploitation of the medical profession but of the patient as well, therefore be it

Resolved, That the House of Delegates of the Missouri State Medical Association, in convention assembled, condemns the practice of medicine for profit by either hospital or medical school, and be it further

Resolved, That our Delegates to the American Medical Association be instructed to so inform the House of Delegates of the American Medical Association, and be it further

Resolved, That the American Medical Association remove every hospital engaged in the practice of medicine from the list of hospitals approved for internship and residency training, and be it further

Resolved, That the American Medical Association remove any offending medical school from its list of institutions approved for medical teaching.

The following resolution was presented by C. P. Dyer, M.D., St. Louis:

WHEREAS, It has been brought to our attention that Dr. Homer Kerr, Past President of the Association, is unable to attend the 91st Annual Session of the Missouri State Medical Association because of illness, and

WHEREAS, Dr. Kerr is widely known and highly regarded by all doctors in Missouri, and

WHEREAS, We would like to have him know of our concern for his welfare, therefore be it

Resolved, That this House of Delegates, now assembled, hopes that he will soon recover his health and resume his place in our midst.

Upon motion, the resolution was referred to the Reference Committee on Miscellaneous Affairs.

A. R. McComas, M.D., Sturgeon: I would like to suggest a similar resolution in reference to Dr. J. Frank Harrison of Mexico who also is ill.

Upon motion, this was referred to the Reference Committee on Miscellaneous Affairs.

The following resolution was introduced by Llewellyn Sale, M.D., St. Louis:

WHEREAS, There is an increase in the incidence of diabetes mellitus and a need for greater cooperation between the public and the medical profession in bringing to light many unknown diabetics, and

WHEREAS, There is a need in the Missouri State Medical Association for a standing committee to inform the members as to the best method of treatment of this disease and to cooperate with public health officers of the state in the early detection of this disease, therefore be it

Resolved, That the By-Laws of this Association be amended as follows:

Amend Chapter 7, page 13, Section 1, by adding the words "A Committee on Diabetes," so that when amended, the Section will read: "Section 1. The Standing Committees of this Association shall be as follows: A Committee on Scientific Work, A Committee on Diabetes. . ."

Upon motion, the resolution was referred to the Reference Committee on Constitution and By-Laws.

The following resolution was presented by Marry Morris, M.D., St. Louis.

WHEREAS, The American Medical Association, by official action of its House of Delegates, has condemned on several occasions, the acceptance of rebates by its members, and

WHEREAS, At the Interim Session of that body in St. Louis, November 30, to December 3, 1948, they further recommended that various state medical associations give serious consideration to the introduction of legislation making the practice of rebating by physicians illegal; now, therefore be it

Resolved, That the House of Delegates of the Missouri State Medical Association approve of legislation designed to stamp out this evil, and to have the following legislative act adopted in this State:

"Section 1. Any persons licensed by any licensing board in the State of Missouri to practice or use any science or system in treating diseases or defects of the human body, who accepts in addition to his fees or charges for professional services, if any are received or made, any rebate, commission or other type of payment, either directly or indirectly, in connection with the writing of a prescription or formula, or for any supplies a patient has been directed or advised to procure, shall be deemed to have engaged in unprofessional conduct, but this shall not include any licensee otherwise authorized by law to prepare his own prescription or formula or sell supplies for a reasonable charge.

"Section II. No charge for unprofessional conduct shall be brought against any licensee or any licensing board, unless a sworn complaint accompanied by at least two corroborative affidavits has been filed with the board. No license shall be revoked or suspended except after a hearing in the manner provided by law for the board making the charges. If the charge be substantiated, the licensing board having jurisdiction shall revoke or suspend the license."

Upon motion, this resolution was referred to the Reference Committee on Resolutions.

The following resolution was presented by B. E. DeTar, M.D., Joplin:

WHEREAS, It is considered desirable to have a handbook giving information of a general nature, as to the history, purposes, activities of the Association, in addition to a directory of members, therefore be it

Resolved, That a committee of three members be appointed by the Council to prepare and publish a handbook containing, in addition to a directory of members, information and data concerning the history, purposes and activities of the Association and such other matters as the committee determines is desirable, and be it further

Resolved, That it be published as a separate publication, or as an issue of THE JOURNAL of the Missouri State Medical Association, as the committee shall determine.

Upon motion, this resolution was referred to the Reference Committee on Resolutions.

The House of Delegates recessed until 4:30 p. m. on Monday.

### MONDAY, MARCH 28, 1949 —AFTERNOON SESSION

The recessed session of the House of Delegates convened at 4:30 p. m. on Monday, March 28, with F. T. H'Doubler, M.D., Springfield, Vice Speaker, presiding.

H. L. MANTZ, M.D., Kansas City, gave the report of the Reference Committee on Amendments to the Constitution and By-Laws:

### REPORT OF THE REFERENCE COMMITTEE ON CONSTITUTION AND BY-LAWS

The first resolution was as follows:

WHEREAS, The present Articles of Association of the Missouri State Medical Association were adopted and approved by the Court in 1904, and

WHEREAS, There have been changes in the By-Laws in the government and administration that are not in conformity with such articles, therefore be it

Resolved, That the officers of the Association shall be directed to take the necessary steps to amend the Articles of Association so that when amended they shall be as follows:

"Article I. This Corporation, located in the City of St. Louis, State of Missouri, shall be known by the name and style of Missouri State Medical Association, and by such name shall have the right to contract and be contracted with; to plead and implead; to sue and be sued; and, shall have the right to acquire, own, mortgage and dispose of such real and personal property as shall be necessary for the proper maintenance and conduct of its affairs.

"Article II. The purpose of this Association are to bring into compact organization the entire medical profession of the State of Missouri with the view of the extension of medical knowledge and the advancement of medical science, to promote and elevate the standards of medical education, and the enactment and enforcement of just medical and public health laws, to encourage friendly intercourse among physicians and guard and sustain measures of interest and advantage to the public and the medical profession; and to promote science, knowledge and skill among the medical profession.

"Article III. This Association shall have the right to enact By-Laws providing for the government of this Association."

The Reference Committee moves that the resolution on the amendment to the Charter be adopted and that the legal procedures necessary be completed as soon as possible.

Upon second, the motion was carried.

DR. MANTZ: The Committee moves that the present Constitution of the Missouri State Medical Association be rescinded at the next Annual Session of the House of Delegates, provided that the By-Laws are amended by that time. It is necessary to give notice one year in advance before a change be made in the Constitution so this motion should lie on the table for one year.

VICE SPEAKER: This is referred to the Council and the standing Committee on Constitution and By-Laws so that it may lay over for one year.



DR. MANTZ: The Committee recommends that a Committee on Diabetes Mellitus be established.

On second, the motion carried.

DR. MANTZ: All other recommendations and resolutions having to do with By-Law changes are referred to the standing Committee on Constitution and By-Laws inasmuch as the complete revision is being made this year. If there are any special combinations or malgations desired by the Council, they may be set up on a trial basis during the year. The Committee moves that this be done.

On second, the motion carried.

DURWARD G. HALL, M.D., Springfield, gave the report of the Reference Committee on Resolutions as follows:

## REPORT OF THE REFERENCE COMMITTEE ON RESOLUTIONS

The House of Delegates of this session referred to the Reference Committee on Resolutions, March 27, a resolution regarding rebates. The Committee has considered this resolution and is presenting it to the House of Delegates for action, as revised, herein:

WHEREAS, The American Medical Association, by official action by the House of Delegates, has condemned on several occasions the acceptance of rebates by its members, and

WHEREAS, At the Interim Session of that body in St. Louis, Missouri, meeting from November 30 to December 3, 1948, they further recommended that various state medical associations give serious consideration to the introduction of legislation making the practice of rebating by physicians illegal, now, therefore be it

Resolved, That the House of Delegates of the Missouri State Medical Association approve legislation designed to eliminate this evil and to have its Council initiate proceedings to have the following legislative act adopted in this State:

"Section I. Any person licensed by any licensing board in the State of Missouri, to practice or use any science or system in treating diseases or defects of the human body, who accepts in addition to his fees or charges for professional services, if any are received or made, any rebate, commission or other type of payment, either directly or indirectly, in connection with the writing or filling of a prescription or formula, or for any supplies the patient has been directed or advised to procure, shall be deemed to have engaged in unprofessional conduct, but this shall not include any licensee who prepares his own prescription or formulae, or sells supplies for a reasonable charge.

"Section II. No charge for unprofessional conduct shall be brought against any licensee by any licensing board unless a sworn complaint, accompanied by at least two corroborating affidavits has been filed with the board. No license shall be revoked or suspended except after a hearing in the manner provided by law for the board making the charges. If the charge be substantiated, the licensing board having jurisdiction shall revoke or suspend the license."

It is further Resolved, That copies of this resolution be forwarded to the Governor of the State of Missouri, and to all members of the Missouri State Legislature.

Mr. Speaker, this resolution, in this revised form, has been approved by the Reference Committee on Resolutions, and inasmuch as it is understood that there is at this time a bill pending before the Missouri State Legislature that is not nearly so well stated and which would make it possible for the licensing board to have to take under consideration the revocation of the license of almost any physician, just on the basis of a telephone call or adverse information, it is submitted with the recommendation and motion for approval by the Reference Committee.

Upon second, the motion carried.

DR. HALL: The Committee on Resolutions of the 91st Annual Session of the House of Delegates of this Association on March 27, 1949, reaffirmed the resolution submitted by the special committee of the House of Delegates in the 90th Session at St. Louis, Missouri in 1948, Re: The Condemnation of Hospital and Medical Colleges engaging in the practice of Medicine for profit. This resolution was submitted as follows, and upon motion, duly seconded, was adopted as follows:

WHEREAS, There is an ever increasing tendency on the part of hospitals and medical schools throughout the United States to engage in the practice of medicine for profit, and

WHEREAS, This corporate practice of medicine is a professional evil second only in its consequences to socialized medicine, and,

WHEREAS, Such practice constitutes not only exploitation of the medical profession, but of the patient, as well, therefore be it

Resolved, That the House of Delegates of the Missouri State Medical Association, in convention assembled, condemn the practice of medicine for profit by either hospital or medical school, and be it further

Resolved, That our Delegates to the American Medical Association be instructed to so inform the House of Delegates of the American Medical Association; and be it further

Resolved, That the American Medical Association remove every hospital engaged in the practice of medicine from the list of hospitals approved for internship and residence training, and be it further

Resolved, That the American Medical Association remove any offending Medical School from its list of institutions approved for medical teaching.

You heard the discussion on this yesterday; as you know, it was approved in the 90th Session. It is the recommendation of this House of Delegates' Reference Committee on Resolutions, that the present House of Delegates reaffirm this resolution and refer continued action to the Council of the Missouri State Medical Association for implementation through (a) action of the Missouri State Medical Association, where possible; (b) action upon final reports from the appropriate committees of the American Medical Association when available; and (c) action of the county medical societies in the localities where such incidents occur. I move the adoption.

Upon second, the motion carried.

DR. HALL: The third and last resolution for today: The House of Delegates of the 91st Annual session of this Association referred to the Reference Committee on Resolutions, March 27, 1949, a resolution concerning the publication of a Handbook and Directory of the Association. The Reference Committee has considered this proposed resolution at length. It is the opinion of the committee that a real need does exist for such a document, in a form that is constantly and readily available to all members for purposes of unifying the state medical policy and proper orientation of members, as well as a concrete and organized source of ready information for all workers in dealing with the history, purposes and activities of the Association, and with a unified directory including specialists. The Committee further feels that the use of such a well constructed and readily available hand book will do much to further the information available for constituent members of the Association. It is believed that the publication of this Handbook at this time will fulfill an important public information requirement. After due deliberation, it is the opinion of the committee that the importance of this publication for the reasons set out warrants the preparation during 1949, as a separate Handbook, rather than the inclusion of a directory and some factual data in a regular issue of THE JOURNAL of the Missouri State Medical Association. The Committee, therefore, returns to the floor of the House of Delegates the basic resolution, as revised, to wit:

WHEREAS, It is considered desirable to have a Handbook giving general information and facts as to the history, organization, policies, purposes and activities of the Missouri State Medical Association, in addition to a Directory of Members, which is cross-indexed and properly annotated, as to the specialists, and location of members, therefore be it

Resolved, That a committee of three members of the Association be appointed by the Council of the Missouri State Medical Association to prepare and publish during 1949, a suitable Handbook of Information concerning the Missouri State Medical Association, which will contain in addition to a Directory of Members, information and data concerning the history, organization, policies, objectives, purposes and activities of said Association, and such other matter and data as the committee deems desirable, and be it further

Resolved, That this Handbook be published as a separate publication, which within itself will be capable of revision and modernization from time to time, and be it further

Resolved, That the expense for the publication of this Handbook be included as an item in the budget for Public Relations.

The Reference Committee on Resolutions moves the adoption of this resolution.

Upon second, the motion was passed.

C. Braxton Davis, M.D., Nevada, gave the report of the Reference Committee on Miscellaneous Affairs as follows:

#### REPORT OF THE REFERENCE COMMITTEE ON MISCELLANEOUS AFFAIRS

The Committee on Miscellaneous Affairs had two resolutions referred to it. The first follows:

WHEREAS, Dr. J. Frank Harrison, Mexico, a Past President of this Association, is unable to be with us because of illness, and WHEREAS, Dr. Harrison has befriended us all in this Association, and

WHEREAS, He has spent much time working for the welfare of this organization and the citizens of Missouri, be it now

Resolved, That the members of the House of Delegates of the 91st Annual Session of the Missouri State Medical Association wish for him a rapid recovery and that he soon will be in our midst, and be it further

Resolved, That these sentiments be transmitted to Dr. Harrison.

The second resolution follows:

WHEREAS, We regret to learn of the untimely illness of Dr. Homer Kerr, a Past President of this Association, and that he is unable to be with us and attend this session, and

WHEREAS, Dr. Kerr has been very close to our hearts, and WHEREAS, He has performed valuable service to our Association and to the citizens of this state, be it now

Resolved, That the members of this House of Delegates of the 91st Annual Session of the Missouri State Medical Association extend to him our sincere hope for a speedy recovery and return to this session, where he rightfully belongs, and be it further

Resolved, That these sentiments be transmitted to Dr. Kerr.

Upon motion, duly seconded, the resolutions were adopted.

R. E. Schlueter, M.D., St. Louis, gave the report of the Reference Committee on Reports of Officers and Standing Committees as follows:

#### REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND STANDING COMMITTEES

The first matter that we have under consideration is the recommendations of the President-Elect. You have heard his address, and I do not think there is any need for repeating that at this time. The Committee has studied the message of the President-Elect, and approves everything contained in it, feeling assured that he is fully aware of the important problems which will arise during the coming administration. However, we recommend that the two resolutions embodied in the recommendations be considered separately. I move, Mr. Speaker, the adoption of this portion of the report.

Upon second, the motion carried.

DR. SCHLUETER: This first resolution which is quite important, follows:

WHEREAS, The United States has the highest standards of health, of medical care and of scientific medical facilities of any country in the world, as the result of our system of free enterprise; and

WHEREAS, Compulsory health insurance, wherever tried, has caused a decline in national health and a deterioration of medical standards and facilities, and

WHEREAS, Wherever the government has assumed control of medical services, the results have been tremendous multiplication of costs over original estimates, extreme tax burdens and national deficits, and gradual extension of socialization into other activities of national life, therefore be it

Resolved, That the Missouri State Medical Association does hereby go on record against any form of compulsory health insurance, or any system of political medicine designed for national bureaucratic control, and be it further

Resolved, That a copy of this resolution be forwarded to the President of the United States, to each Senator and Representative from the State of Missouri, and that the Senators and Representatives be and are hereby respectfully requested to use every effort at their command to prevent the enactment of such legislation.

Mr. Speaker, I move the adoption of this part of the resolution.

Upon second, the resolution was adopted.

DR. SCHLUETER: Another resolution follows:

WHEREAS, The Missouri State Medical Association desires to take a more active part in the promotion of more hospitals and diagnostic facilities in rural Missouri, therefore be it

Resolved, That the Committee on Rural Medical Service and the Committee on Medical Education and Hospitals, of this Association be directed to familiarize themselves more thoroughly with the Missouri hospital construction plan, as it now exists, and keep informed of changes, as they may occur, and that these committees offer their assistance to the Division of Health and the Advisory Council, to the end that this hospital construction plan may be accelerated.

I move the adoption of that part of the report.

Upon second, the motion carried.

DR. SCHLUETER: The Committee moves the adoption of the Report of the Council.

Upon second, the motion carried.

DR. SCHLUETER: The Committee recommends the adoption of the report of the Committee on Tuberculosis and I so move.

Upon second, the report was adopted.

DR. SCHLUETER: The Committee recommends the adoption of the Report of the Secretary, and I so move.

Upon second, the report was adopted.

DR. SCHLUETER: The Committee recommends the adoption of the Report of the Executive Secretary, and I so move.

Upon second, the report was adopted.

DR. SCHLUETER: The Committee recommends the adoption of the Report of the Treasurer, and I so move.

Upon second, the report was adopted.

DR. SCHLUETER: The Committee recommends the adoption of the printed Report of the Committee on Postgraduate Course.

Upon second, the report was adopted.

DR. SCHLUETER: The second part of the report of the Committee on Postgraduate Course is an amendment to the By-Laws as follows:

Amend Chapter VII, Section 1, page 13, lines 3 and 8, by striking out all of lines 3 and 8, and inserting in lieu thereof, the following: "A Committee on Scientific and Postgraduate Work" so that the section when amended will read: "A Committee on Scientific and Postgraduate Work, A Committee on Publications, A Committee on Medical Defense . . ."

Amend Chapter VII, Section 2, page 13, by striking cut all of Section 2 and inserting in lieu thereof the following: "The Committee on Scientific and Postgraduate work shall determine the character and scope of scientific proceedings of the Association for each Annual Session subject to the instructions of the House of Delegates. The Committee shall provide speakers for district society meetings when requested."

Amend Chapter VII, Section 8, page 15, by striking out all of Section 8.

The Committee recommends that these amendments be referred to the standing Committee on Constitution and By-Laws, and I so move.

Upon second, the motion was carried.

DR. SCHLUETER: The Committee recommends the adoption of the Report of the Committee on Publication and I so move.

Upon second, the report was adopted.

DR. SCHLUETER: The Committee recommends the adoption of the Report of the Committee on Scientific Work and I so move.

Upon second, the report was adopted.

DR. SCHLUETER: The Committee recommends the adoption of the Report of the Committee on Defense, and I so move.

Upon second, the report was adopted.

DR. SCHLUETER: The Committee recommends the adoption of the Report of the Committee on Medical Economics, and I so move.

Upon second, the report was adopted.

DR. SCHLUETER: The Committee recommends the adoption of the Report of the Committee on Mental Health, and I so move.

Upon second, the report was adopted.

DR. SCHLUETER: The Committee recommends the





# Daricraft Babies

More and more  
doctors are prescribing  
Daricraft Homogenized  
Evaporated Milk  
for babies . . . and for  
convalescent diets

Always uniform in quality, safe, steri-  
lized, high in food value and minerals.  
Contains 400 U. S. P. units Vitamin D  
per pint of Daricraft. Easily digested.



PRODUCERS CREAMERY CO., SPRINGFIELD, MO.

Advertisement



From where I sit  
*by Joe Marsh*

## How's Your Listening Time?

*Buck Howell and I were in Baleville last week. Dropped in at Bob's diner where some friends were sitting around talking about whether to sell their hogs now or wait.*

Right away, Buck plunges right into the discussion. He's lecturing away when suddenly they all stand up and start stomping their feet like it was an Indian war dance.

*I'm flabbergasted. But Buck only looked sheepish: "Guess I was talking again, when I should-of been listening. When a person's talking time gets out of line with his listening time around here, the gang reminds him by standing up and stomping."*

From where I sit, that's a good system. Everyone has a right to his opinions—but others have a right to *theirs*—whether it's deciding between to sell or not to sell, apple or cherry pie, or a glass of beer or cider. Life's more interesting that way, and hang it if you don't sometimes learn something!

*Joe Marsh*

Copyright, 1949, United States Brewers Foundation

adoption of the report of the Committee on Maternal Welfare, and I so move.

Upon second, the report was adopted.

DR. SCHLUETER: The Committee recommends the adoption of the Report of the Committee on Infant Care and I so move.

Upon second, the report was adopted.

DR. SCHLUETER: The Committee recommends that the Report of the Committee on Health and Public Instruction be adopted and I so move.

Upon second, the report was adopted.

DR. SCHLUETER: The Committee recommends the adoption of the Report of the Committee on Fractures and I so move.

Upon second, the report was adopted.

DR. SCHLUETER: The Committee recommends the adoption of the Report of the Committee on Industrial Health. I move its adoption.

Upon second, the report was adopted.

DR. SCHLUETER: The Committee recommends the adoption of the Report of the Committee on Control of Venereal Disease and I move its adoption.

Upon second, the report was adopted.

DR. SCHLUETER: The Committee recommends the adoption of the Report of the Committee on Anesthesiology. I move its adoption.

Upon second, the report was adopted.

DR. SCHLUETER: The Committee recommends the adoption of the Report of the Committee on Study of Cardiac Diseases and I so move.

Upon second, the report was adopted.

DR. SCHLUETER: The Committee recommends the adoption of the Report of the Committee on Rural Medical Service and I move its adoption.

Upon second, the report was adopted.

DR. SCHLUETER: The Committee recommends the adoption of the Report of the Committee on Conservation of Eyesight, and I so move.

Upon second, the report was adopted.

A. N. ALTRINGER, M.D., Kansas City: The Committee on Public Policy and Public Relations felt that their report was incomplete and too thoroughly excerpted. They wish that the report be printed complete, with its recommendations.

After discussion, Dr. Schlueter stated that the Reference Committee would meet on Tuesday morning with the Committee on Public Policy and Public Relations.

Upon motion, duly seconded, the report of the Reference Committee was adopted as a whole.

The report of the Council, J. W. Thompson, M.D., St. Louis, Chairman, follows:

#### REPORT OF THE COUNCIL

In regard to the four year medical school, the Council was instructed to secure additional factual information which might be presented to the House of Delegates and to the members of the Missouri legislature. Mr. Lemoine Skinner has spent a couple of months making a most exhaustive investigation, gathering factual data which is pertinent, in the interest of the people of Missouri and quite important to the legislators and the curators when they come to consider this important project. That material is not quite ready for presentation at this time, but the Council wishes to report progress, and to say that the information will be available to the interested parties.

The Council also approved instruction to the Association office that letters be sent to the secretaries of component societies pointing out the urgency to men who received their medical education and training under the Government auspices, the ASCP and the V12 programs. The drafting of physicians, so far has been avoided through the efforts of the A.M.A. office. It is the wishes of the Council that the drafting of physicians be further avoided, so as not to have the onus of that stigma upon the medical profession. The various local societies will receive the names which we have gotten through the Manpower Resources authorities,

Secretary Forrestal, the Defense Commissioner. The young doctors should, out of their patriotic duty, out of a sense of obligation to the country which provided them with their medical education and subsidized their training up to the present time, as their patriotic duty offer themselves as volunteers to replace the men who have already served their time, most of them for a period of two years, to take care of the Army and Navy personnel, most of whom have volunteered to give their services in the service of their country. I think it would be a shame and a disgrace to the medical profession of the State of Missouri, and throughout the United States, if sufficient numbers of these young men, who have received their education, paid for by the government, do not volunteer their services in the interests of their country.

I move the adoption of the report.

Upon second, the report was adopted.

VICE SPEAKER: Is there any New Business to come before the House:

CARL F. VOHS, M.D., St. Louis: I move that the meeting on Wednesday afternoon be set at 1:00 p. m. instead of 1:30 p. m.

Upon second, the motion was carried.

CARL F. VOHS, M.D., St. Louis: The Nominating Committee wishes to offer the following resolution:

It is the consensus of opinion that the Alternate Delegates to the American Medical Association should be active in state and national medical affairs, so that they can intelligently replace the Delegates at any time and that they should attend every meeting of the American Medical Association; therefore be it

*Resolved*, That the expenses of the alternate Delegates to the American Medical Association should be paid on the same basis as those of the Delegates.

Upon motion, duly seconded, the resolution was referred to the Reference Committee on Resolutions.

RALPH E. DUNCAN, M.D., Kansas City: I move that the following resolution be adopted:

WHEREAS, As a result of legislation over the years, the government of the State of Missouri is dealing with the public health and the practice of medicine to an ever increasing extent, as evidenced by the broader functions of the State Division of Health and the activities under hospital construction acts, venereal disease control, the tuberculosis control program, mental hospital administration, mental hygiene and social security, and

WHEREAS, All of these activities have to do with the public health and in varying degree relate to the practice of medicine, and there is a probability of some kind of socialized practice of medicine, and

WHEREAS, The executive offices directing these various activities are located at Jefferson City, Missouri, and

WHEREAS, Because of the increase in scope of such activities, it is highly desirable that the headquarters of our Association be located at Jefferson City, Missouri, so that members of this Association and its employees may actively participate in all such matters pertaining to the health and welfare of the people of Missouri, and the practice of medicine in this state, and keeping in close touch therewith, and this can be most effectively done only by having the Association's headquarters located in Jefferson City, Missouri; now, therefore be it

*Resolved*, That a committee of five members be appointed by the President to acquire suitable quarters in Jefferson City, Missouri, to house the executive offices of our Association, that the committee make a report of their investigation to the Council within six months of this date, that if adequate quarters that may be leased are found by the committee, the Council is directed and authorized to negotiate a lease satisfactory to it for its headquarters, and to move the headquarters of the Association from St. Louis, Missouri, to Jefferson City, Missouri; and that the Council be authorized and directed to furnish any funds in connection therewith, that may be necessary, and to take such funds from the general or reserve funds of the Association, as the Council may determine, be it further

*Resolved*, That if the committee, however, shall report to the Council that it is unable to locate any suitable available quarters for leasing, then, in that event, the committee shall investigate a suitable location that might be purchased by the Association upon which a building might be erected for their headquarters, and report to the Council, and that the Council in such an event is directed and authorized to negotiate an option on said real estate and have plans prepared by an architect for a suitable building thereon, that all this shall be reported to the next regular session of the House of Delegates for action; if however, the Council shall deem it necessary, a special meeting of the House of Delegates shall be called to consider and act upon any question necessary in,



or connected with, the acquisition of the real estate and erecting a building for the Association's headquarters.

The motion was seconded.

Upon amendment to the motion by Victor E. Scherman, M.D., St. Louis, the resolution was referred to the Reference Committee on Resolutions.

VICTOR B. BUHLER, M.D., Kansas City: I wish to present two resolutions:

*Resolved*, That the Missouri State Medical Association endorses the study and review, with intent to revise, the Missouri laws on necropsies.

Upon motion, duly seconded, the resolution was adopted.

DR. BUHLER: The second resolution is:

*Resolved*, That the Missouri State Medical Association endorses and urgently recommends the enactment of a law to replace the present elected county coroners by state appointed medical examiners.

Upon motion, duly seconded, the resolution was adopted.

DENTON VAIL, M.D., Springfield: I wish to present the following resolution in view of the fact that the legislature recently has rejected measures for the control of undulant fever:

WHEREAS, Statistics indicate that during the mobilization of this country for war effort, the great demand of the Armed Services for meat products and the lack of available manpower for handling farm products and assisting in animal husbandry definitely indicated an increase in the amount of livestock infected with Bang's disease, especially in the Midwestern area of the United States; and

WHEREAS, The increase in the incidence of Bang's disease (synonyms: undulant fever, Malta fever, etc.) which is reflected with increase of clinical symptoms of patients with undulant fever throughout the Middle West and the United States, in addition to an extension of this endemic area; and

WHEREAS, Recent attempts of legislation to enforce testing control and the elimination of livestock, thus eliminating the animal vectors of this disease, as demonstrated by tests showing positive reactions to agglutination tests, has failed for various reasons in this state, including the opposition of commission companies and corporations handling livestock for the meat industry, and

WHEREAS, The elimination of such vectors which would eventually lead to the eradication of this disease is unbearable and cannot be tolerated by the Medical Profession; now, therefore be it

*Resolved*, That the Missouri State Medical Association wishes to spread its concerted opinion as to the need for such legislation, requiring the testing of animals, including herds of goats, swine and cattle, with necessary authority to prevent the spread of this disease and the elimination of the vectors; and be it further

*Resolved*, That copies of this resolution be furnished the Governor of the State of Missouri, the American Medical Association, Representatives and Congressmen to the United States, and Legislators of the State of Missouri.

Upon motion, duly seconded, the resolution was adopted.

VICE SPEAKER: Our next Annual Session will mark the 100th anniversary of the Association.

ALPHONSE J. RAEMDONCK, M.D., St. Louis: St. Louis takes pride in extending an invitation to meet in St. Louis during this memorial year.

Upon motion, duly seconded, the invitation to meet in St. Louis in 1950 was accepted.

Upon motion, duly seconded, the House of Delegates adjourned.

### WEDNESDAY, MARCH 30, 1949— AFTERNOON SESSION

The House of Delegates convened at 1:00 p. m., March 30, with the Speaker, Ralph E. Duncan, M.D., Kansas City, presiding.

The Committee on Credentials reported a quorum present.

The reading of the minutes of the previous meeting, upon motion duly seconded, was dispensed with by vote.

### NOMINATION FOR PRESIDENT ELECT

Everett D. Sugarbaker, M.D., Jefferson City, nom-

inated W. A. Bloom, M.D., Fayette, for President-Elect.

W. A. Shaw, M.D., Fayette, seconded the nomination.

The Secretary was instructed to cast the unanimous ballot of the House of Delegates for Dr. W. A. Bloom, Fayette, for President-Elect. The Secretary cast the unanimous ballot of the House of Delegates for Dr. Bloom as President-Elect for the ensuing year and the Speaker declared Dr. Bloom so elected.

W. A. BLOOM, M.D., Fayette: Delegates of the Association and friends, in my last twelve years in my work on the Council and as Secretary of this organization, it has been my privilege to have enjoyed the friendship of the finest men I have ever known. Until now I did not fully appreciate how deeply I could feel an appreciation for this honor. For the honor of this office, I thank you.

In my close association with the executive office, I am in a position to know that the Missouri State Medical Association is indeed fortunate in its office personnel. In the sincere and untiring work of Tom O'Brien, Ray McIntyre and Miss Helen Penn—if it were not for their efforts, we would not have such an efficient and well organized society.

In the general trend toward changes in our Democratic way of life and in the practice of medicine, I fully realize the responsibilities of this Association and its officers. It behooves all of us to work together to maintain this freedom. My good friends, I pledge you my sincere efforts to carry out the duties of this office to the best of my ability.

The report of the Committee on Nominations was presented by Carl F. Vohs, M.D., St. Louis, as follows:

### REPORT OF THE COMMITTEE ON NOMINATIONS

For Vice Presidents: J. C. Creech, M.D., Troy; E. J. McIntire, M.D., Carthage; H. M. Henrickson, M.D., Poplar Bluff.

For Delegates to the American Medical Association: For Delegate, R. E. Schlueter, M.D., St. Louis; alternate, F. G. Pernoud, M.D., St. Louis. Delegate, James R. McVay, M.D., Kansas City; alternate, R. B. Wray, M.D., Nevada.

For Speaker of the House of Delegates, F. T. H'Doubler, M.D., Springfield; Vice Speaker, Victor E. Scherman, M.D., St. Louis.

On motion, duly seconded, these officers were declared elected.

The Secretary reported the results of the election of Councilors as follows:

1st District... Donald M. Dowell, M.D., Chillicothe  
2nd District... W. F. Francka, M.D., Hannibal  
4th District... Otto W. Koch, M.D., Clayton  
6th District... R. W. Kennedy, M.D., Marshall  
8th District... W. S. Sewell, M.D., Springfield  
10th District... Frank W. Hall, M.D., Cape Girardeau

### INSTALLATION OF THE PRESIDENT

Wallis Smith, M.D., Springfield, was installed as President of the Association.

The following appointments to committees were announced by Dr. Smith:

Scientific Work: A. N. Arneson, St. Louis, Chairman; Victor Buhler, Kansas City; H. E. Petersen, St. Joseph.

Postgraduate Course: M. Pinson Neal, Columbia, Chairman; Carl R. Ferris, Kansas City. Associate Members: W. W. Tillman, Bolivar; Kenneth Glover, Mount Vernon; Paul O. Hagemann, St. Louis; D. L. Sexton, St. Louis.

Public Policy and Public Relations: Armand D. Fries, St. Louis, Chairman; J. W. Allee, Columbia.

Defense: O. B. Zeinert, St. Louis; L. P. Forgrave, St. Joseph.

Medical Education and Hospitals: J. S. Knight, Kansas City, Chairman; D. M. Dowell, Chillicothe; O. J. Gibson, Cape Girardeau; Oliver Abel, St. Louis.

Cancer: William E. Leighton, St. Louis; Marvin Napper, Springfield.

Medical Economics: G. A. Aiken, Marshall; A. P. Rowlette, Moberly.

Mental Health: B. L. Elliott, Kansas City; Frank M. Grogan, St. Louis.

Maternal Welfare: E. Lee Dorsett, St. Louis; Leo Hartnett, St. Louis.

Infant Care: Peter G. Danis, St. Louis; Park J. White, St. Louis. Associate Members: J. C. Jaudon, St. Louis; D. B. Landau, Hannibal.

Health and Public Instruction: J. Earl Smith, St. Louis.

Constitution and By-Laws: W. Logan Allee, Eldon; H. O. Loyd, Jefferson City.

Fractures: D. L. Yancey, Springfield. Associate Members: Jacob Kulowski, St. Joseph; B. L. Murphy, Hannibal.

Conservation of Eyesight: C. Souter Smith, Springfield; Robert S. Minton, St. Joseph. Associate Members: Winfred L. Post, Joplin; Philip Luedde, St. Louis; John McLeod, Kansas City; G. J. Tygett, Cape Girardeau; S. L. Freeman, Kirksville; H. B. Stauffer, Jefferson City; E. D. Tenaglia, St. Louis.

Control of Venereal Disease: A. W. Neilson, St. Louis; E. M. Cannon, St. Louis.

Industrial Health: A. M. Ziegler, Kansas City; R. A. Sutter, St. Louis. Associate Members: R. Emmet Kelly, St. Louis; H. M. Roebber, Bonne Terre.

Physical Medicine: F. Garrett Pipkin, Kansas City; Luke Knese, St. Louis; A. J. Kotkis, St. Louis; J. L. Washburn, Versailles.

Tuberculosis: E. E. Glenn, Springfield; Lawrence E. Wood, Kansas City; J. L. Mudd, St. Louis; Paul Murphy, St. Louis; C. A. Brashear, Mount Vernon; W. P. McDonald, St. Joseph; I. J. Flance, St. Louis; Florence E. MacInnis, Kansas City.

Study of Cardiac Diseases: A. Graham Asher, Kansas City; Glen W. Hendren, Liberty. Associate Members: Horace W. Carle, St. Joseph; J. W. Fleming, Moberly; C. B. Davis, Nevada; Arthur Strauss, St. Louis; William I. Park, Springfield.

Col. Paul J. Matte, Kansas-Missouri Recruiting District, Kansas City, was introduced.

COL. MATTE: I believe Dr. Thompson has mentioned something about the drive of the Army and Navy to get doctors to fill the ranks. You probably know that we are losing a large number of doctors who came in, some of them by force, via the ASCP. Their periods of service have expired, or are about to expire, and on the face of it the outlook is vague as to where we will get replacements. The Army can only be as large as the medical facilities are capable of caring for, and we never know when we may have to expand beyond our present strength. Unless we have doctors available that can be reached in a hurry, it will be impossible for the Army to make any expansion in any emergency. We have several sources from which doctors can be obtained. We have the officers who have already received their education from the government, the ASCP; we have students in medical schools, and we have practicing doctors.

The Army is prepared to offer some good assignments to civilian doctors, assignments that cannot be obtained, in a good many cases, from other sources. We have openings in the Regular Army up to the grade of First Lieutenant or Captain, depending upon the ability or the standing of the doctor in his community. A First Lieutenant would get as much as \$417.00 per month. Or, if a doctor is not interested in the Regular Army, he can join as a Reserve Officer and serve for a period of only two years, in which case he would get the same pay or if he has professional standing of long standing, he can even come in with a grade of Colonel; in other words, there is no limit in the Reserve Corps to the rank that is given a Reserve Officer in the Medical Corps. That is exceedingly good pay, for a period of two years, while the doctor is adapting himself.

There are other factors in our need of doctors. We have a new branch, called Medical Service Corps, in which a man does not necessarily have to be a doctor, but is, for instance, a pharmacist or a medical student who may not have graduated but is able to meet the requirements. The purpose of the Medical Service corps is to do away with the paper work and let doctors devote their full attention to medical problems. There is also need of veterinarians in the Army. Of course, there has always been a need for nurses. The only way in which we can get any of these people I have mentioned is through you gentlemen, through your efforts, through your ability to steer the young men into the proper channels. There are several inducements that are offered. If a man joins the Regular Army, he is offered residencies in five of the Army Hospitals, or in the hospital of his own choosing, providing it is a teaching hospital. These residencies go one, two, three or four years, and the only stipulation is that the doctor will serve at least a year for every years he has spent in the residency. In this particular category the doctor can be either a First Lieutenant or a Captain, receiving full pay during the time of his residency. In case of young men that are just leaving medical school, they can join the Reserve, be commissioned as a First Lieutenant, and get an internship in any of the five Army Hospitals, or in any civilian hospital of his own choice, all at government expense. The stipulation there, of course, is the same, that he will serve as many years as the government is paying him during his internship.

We have run across several doctors who are attempting to get into the Army and have had a little difficulty in knowing exactly the proper way to make application. To get into the Regular Army it is necessary to fill out one of two forms. However, probably the easiest way is to get in touch with your Military Manpower Board, and they can give full information. If you are in any doubt, you can write to the Surgeon General of the Army, and he will give all the information needed. If a man is only interested in the Reserve Corps, he can get full information from any of our Military forces such as, the recruiting office, the National Guard headquarters, and if you have any question as to where to find these, write direct to the Commanding General of the Army which, in our case, is the Fifth Army, in Chicago.

In conclusion, I would like to repeat that we can expand only to the extent that we have medical facilities, and we feel that it is incumbent upon every citizen to help the Army secure its shortages in the ranks, and we feel that you are the only gentlemen that will be able to give us what help we need. We would appreciate it, if you yourselves are not interested, if you will pass on the word to students in medical school or young doctors to get in touch with the proper authorities.

SPEAKER: The next order of business is installation of officers, councilors and committee members. Will all newly elected officers, councilors and committee members come forward and remain standing?

WALLIS SMITH, M.D., Springfield: At this point in our ceremony today, we approach a phase which is of utmost importance and solemnity, the induction of new officers. Twice blest is he who merits, by your actions, the confidence and esteem of his colleagues. First, they know he will serve selflessly in the interests of all for a common cause; second, he will act, at all times and on all occasions, as a chosen steward of the responsibilities entrusted to his care. Twice cursed is he who fails in his trust. First, as he dissipates his opportunities to serve faithfully and, moreover, as he does not function to the best of his abilities, the expressed faith of his colleagues suffers an irreparable blow; second, his own inner conscience remains unshakable with him always, to remind him: "Thou hast failed, thou wert tried and thou wert found wanting." Therefore, I charge each and every one of you with the duties and responsibilities proscribed to your office. I charge you to execute these fully, faithfully and to the best of your ability. I charge



**AT HOME  
OR AWAY** **SPOT  
TESTS** **SIMPLIFY  
URINALYSIS**

**No Test Tubes • No Measuring • No Boiling**

Diabetics welcome "Spot Tests" (ready to use dry reagents), because of the ease and simplicity in using. No test tubes, no boiling, no measuring; just a little powder, a little urine—color reaction occurs at once if sugar or acetone is present.

**Galatest... Acetone Test (DENCO)**

**FOR DETECTION OF  
SUGAR IN THE URINE**

**FOR DETECTION OF  
ACETONE IN THE URINE**

**SAME SIMPLE  
TECHNIQUE FOR BOTH**

1. A LITTLE POWDER

2. A LITTLE URINE

**COLOR REACTION IMMEDIATELY**



A carrying case containing one vial of Acetone Test (Denco) and one vial of Galatest is now available. This is very convenient for the medical bag or for the diabetic patient. The case also contains a medicine dropper and a Galatest color chart. This handy kit or refills of Acetone Test (Denco) and Galatest are obtainable at all prescription pharmacies and surgical supply houses.

Accepted for advertising in the *Journal of the A.M.A.*

WRITE FOR DESCRIPTIVE LITERATURE

**Acetone Test (DENCO)... Galatest**  
**The Denver Chemical Manufacturing Co., Inc.**

163 Varick Street, New York 13, N. Y.

**Cook County Graduate School of Medicine  
Announces Continuous Courses**

**SURGERY**—Intensive Course in Surgical Technique, two weeks, starting July 25, August 22, September 26.

Surgical Technique, Surgical Anatomy and Clinical Surgery, four weeks, starting July 11, August 8, September 12.

Surgical Anatomy and Clinical Surgery, two weeks, starting July 25, August 22, September 26.

Surgery of Colon and Rectum, one week, starting September 12, October 10.

Esophageal Surgery, one week, starting October 10.

Thoracic Surgery, one week, starting October 3.

Breast and Thyroid Surgery, one week, starting October 10.

Fractures and Traumatic Surgery, two weeks, starting October 3.

**GYNECOLOGY**—Intensive Course, two weeks, starting September 26, October 24.

Vaginal Approach to Pelvic Surgery, one week, starting September 19, November 7.

**OBSTETRICS**—Intensive Course, two weeks, starting September 12, November 7.

**MEDICINE**—Intensive General Course, two weeks, starting October 3.

Gastroenterology, two weeks, starting October 24.

Gastroscopy, two weeks, starting July 18, September 26.

Electrocardiography and Heart Disease, two weeks, starting July 18.

Electrocardiography and Heart Disease, four weeks, starting September 7.

**PEDIATRICS**—Personal Course in Cerebral Palsy, two weeks, starting August 1.

**DERMATOLOGY**—Formal Course, two weeks, starting October 24. Informal Clinical Course every two weeks.

**UROLOGY**—Intensive Course, two weeks, starting September 26. Ten Day Practical Course in Cystoscopy every two weeks.

**GENERAL, INTENSIVE AND SPECIAL COURSES IN ALL BRANCHES OF MEDICINE, SURGERY AND THE SPECIALTIES.**

**Teaching Faculty—Attending Staff, Cook County Hospital Registrar, 427 South Honore St., Chicago 12, Ill.**



One of Four Main Buildings

**GLENWOOD SANATORIUM**

A Private Hospital for Care of Nervous and Mental Disorders, Alcohol and Narcotic Addictions.

Thoroughly equipped for all the approved therapeutic measures. Insulin, metrazol and electro shock used in selected cases.

Four main buildings for patients permit ample classification facilities. Large grounds composed of about fifty acres make many out-of-door activities possible.

Phone WEBster 1056

Visiting Consultant  
**W. W. GRAVES, M.D.**  
Visiting Neuropsychiatrist  
**SYDNEY B. MAUGHS, M.D.**

Medical Superintendent  
**PAUL HINES, M.D.**  
Resident Physicians  
**RICHARD J. HESSBERG, M.D.**  
**LEROY J. DIERKER, M.D.**

For full information, address

**PAUL HINES, M.D., Medical Superintendent, Webster Groves, St. Louis 19, Mo.**

you not to be found wanting at the end of your tenure of office. If you abuse these charges, the most elevated office in our power to bestow on you is but mere trappings and empty investitures. Yours, and ours, is the noblest, the greatest of all the great professions. You are the builders in this ever growing monument, this edifice which is ours. I charge that you build well, with strong material, which will stand the acid test of time. I charge you to face yourself daily, and ask: "Is this my best?" And if this ye shall do, ye shall have built well indeed. Yes, far beyond our times ye shall have built, and forevermore shall your name be acclaimed and respected. These things, gentlemen, I charge you.

Gentlemen, do you fully realize the duties, the responsibilities and the effort—the amount of work, of brain and of muscle—involved in your assuming these offices? Do you promise faithfully to carry out to the best of your ability these duties and responsibilities of your offices?

The assembled officers answered "We do."

DR. SMITH: Gentlemen, will you raise your right hand, and place your left (I will ask Dr. Bloom to do that) on this the Holy Bible and repeat after me:

"I (stating name) do hereby publicly affirm my belief in the principles of our organization and furthermore do hereby publicly promise to carry out to the best of my ability all of the duties, responsibilities and the other opportunities afforded me by this office to which you have elected me, so help me God."

SPEAKER: The next order of business is Unfinished Business.

The report of the Committee on Cancer was presented by E. C. Ernst, M.D., St. Louis, Chairman, as follows:

#### REPORT OF THE COMMITTEE ON CANCER

The Committee last year was in the "wishful thing-ing stage" of looking forward to 1949 as a crucial year for researching the necessary goal of a statewide cancer program.

The headquarters offices of the Missouri Division of the American Cancer Society, its officers, executive director, executive committee, twenty laymen and twenty physicians comprising the board of directors and field army commander are now located in Jefferson City. This organization in cooperation with the cancer division of the State Department of Health and the Committee on Cancer of the Missouri State Medical Association have made these present accomplishments possible in the interest and benefit of the cancer patient.

The Cancer Committee was directed by the Council of the Missouri State Medical Association to cooperate with the Missouri Division of the American Cancer Society toward the fulfillment of these mutual objectives.

In order to assure statewide representation throughout the ten rural and urban councilor districts in Missouri, it was suggested that in the future the county medical societies should make their selection or their nominations of prominent physicians interested in the cancer problem directly to the State Medical Association. They now represent their local medical organizations on the board of directors of the Missouri Division of the American Cancer Society, located in Jefferson City.

The state cancer program is today being conducted by this duly elected board of directors and an executive committee of eleven members and a statewide field army commander, but all of these activities remain under the supervision of Dr. Virden, the president, and the executive director, Mr. George Larson, in cooperation with the Cancer Committee of the Missouri State Medical Association and the Department of Health of the State of Missouri.

Encouraging progress is being made in the direction of broadening the scope of the activities of our state cancer problems for the benefit of the medical and lay community groups.

In all of these cancer activities, research programs, cancer information centers, cancer detection clinics and diagnostic cancer projects, the full cooperation of the local county medical societies is absolutely essential. The cancer interested groups must initiate the needs of their local communities in either the educational or diagnostic cancer project fields, including local fund raising campaign programs, by formally requesting the Missouri Division of the American Cancer Society for their participation. No cancer project is instituted without the written approval of the local cancer representative of the county medical society.

The Ellis Fischel State Cancer Hospital and other similar city or charitable institutions should play an ever increasing role in aiding the many rural cancer problems in our state.

Therefore, we would strongly urge that the medical and lay Cancer Commission members of the Ellis Fischel State Cancer Hospital should continue to reflect the cancer service viewpoints of the Missouri State Medical Association, the Missouri Division of the American Cancer Society, and the Department of Health of Missouri, and that the recent difficulties as to the responsibilities of the Cancer Commission be clarified by appropriate legislation. This Commission should continue to direct the medical activities and policies of our state cancer institutions. Perhaps some form of rotating services or appointments of commissioners may be highly desirable.

It might be opportune to state at this time that the present Ellis Fischel State Cancer Hospital has grown from a mere cancer service institution to one whose functions should actually be broadened to include greater facilities of postgraduate training of physicians in the rural area. The tissue diagnostic service should be expanded but similar to all outstate cancer projects or services remain under responsible supervision of your Cancer Committee, and the medical consultants of the State Cancer Hospital.

Many of the activities should be integrated with other rural county cancer programs and well rounded statewide cancer projects in cooperation with any and all other agencies interested in cancer.

The record established by our state hospital in the field of cancer surgery, radiation therapy and early diagnostic cancer procedures for the indigent cancer patients, is equalled by relatively few similar cancer institutions in other states. The present critical economic situation, however, demands that the salaries of those responsible for the future medical and lay activities should be equitably increased so that the present high type of medical and executive personnel may continue to serve this hospital for longer periods of time, avoiding too frequent change over of the scientific, nursing and executive personnel staffs. Your Committee wishes to offer the following recommendations:

1. In the interest of improved rural cancer service—education of the public, training of the physicians in the newer methods of diagnosis, local and statewide cancer symposia, perhaps, also in conjunction with our annual state medical meetings should be planned in cooperation with the postgraduate committee of our Association. Such symposia might also be combined with lay group organizations interested in cancer, especially the field army voluntary workers.

2. The question of more direct cancer service in the less populated rural sections of Missouri can be improved only when additional hospital facilities are made available. For the present the question of mobile cancer x-ray units or roving groups of experienced cancer teams of physicians is being given consideration, and your Committee welcomes suggestions especially from the hyphenated county groups who might be interested.

Upon motion, duly seconded, the report was accepted.

Durward G. Hall, M.D., Springfield, presented the report of the Reference Committee on Resolutions as follows:



## REPORT OF THE REFERENCE COMMITTEE ON RESOLUTIONS

With your permission and the required unanimous approval of the House of Delegates, as required in the By-Laws, Chapter III, Section 1, to bring a resolution before the House of Delegates of the Missouri State Medical Association on the final day of the Annual Session, your Reference Committee on Resolutions has been handed these to bring before you, which in the opinion of the Committee are in keeping with this business session and which we believe will be received gratefully. The first is a resolution submitted by the Missouri Society of Neurologists and Psychiatrists with exploratory appendix statements, which also are reiterated in the resolution, as follows:

WHEREAS, There has been introduced into the State legislature of the State of Missouri a bill designed to change the legal requirements that the State Director of Mental Health of Missouri must be a physician, and a specialist in psychiatry, and,

WHEREAS, The Committee on Mental Health of the Missouri State Medical Association has gone on record as opposing this change in the state law, and,

WHEREAS, The Missouri Society for Neurologists and Psychiatrists at the meeting in Kansas City, Missouri, March 27, 1949, went on record as being strongly opposed to this change; now, therefore be it

Resolved, That the Missouri State Medical Association at its 91st Annual Session in Kansas City, Missouri, expresses official opposition to this proposed change in the Law of the State relating to the qualifications of the Director of Mental Health.

The Reference Committee on Resolutions moves the adoption of this resolution, and its approval by the House of Delegates.

Upon second, the resolution was adopted.

DR. HALL: Following is the second resolution:

WHEREAS, Almighty God in His infinite wisdom has seen fit to remove our long-time friend and fellow worker, Mr. W. Scott Johnson, from all earthly endeavor, and

WHEREAS, Our colleague, W. Scott Johnson, for many years did serve faithfully and capably for the improvement and betterment of the health and welfare of all of the citizens of the State of Missouri, and,

WHEREAS, His loss is an irreparable blow to the causes which he so vigorously and brilliantly championed; therefore be it

Resolved, That his family be apprised of our feeling of loss by his unfortunate and untimely departure; and be it further

Resolved, That our group representing the medical profession in the State of Missouri express our sincere condolences to the family of our dear departed friend and co-worker, Mr. W. Scott Johnson.

This has been approved by the Reference Committee on Resolutions, and we move its adoption.

Upon second, it was adopted.

DR. HALL: The House of Delegates of the Missouri State Medical Association, in Recessed Session, on March 28, 1949, referred to the Committee on Resolutions a resolution entailing a preliminary report of the newly appointed Nominating Committee, which has been considered and is brought back to the House of Delegates for action. There have been customs and practices developed in the Association through the years concerning the nomination and election of Delegates and their Alternates to the American Medical Association, which both the Nominating Committee and the Reference Committee on Resolutions believe to be meritorious, insofar as equal representation of the various metropolitan areas and outlying areas is concerned. Minor changes in these policies may work to the advantage of the Association from time to time. For example, it has become the custom to defray the travelling expenses for the elected Delegates, presumably by Council action under Article X of the Constitution. Perpetuity among the various state and commonwealth delegates to the House of Delegates of the American Medical Association is desirable, especially when they are placed in responsible positions in the American Medical Association, subject to their democratic election by the component state medical associations, but it

is at once obvious that there should be a succession of understudies or alternates to actively participate in the work of the nationwide organization, so that in the event of illness, or sudden lack of availability of the elected delegate for any cause, the alternate can quickly and efficiently fulfill the position and thus maintain the best interests of the Association. This is the spirit of the original idea of the alternate plan. Nevertheless, there have been occasions in the past when the alternate has not functioned as the desired understudy, and has not even attended the meetings with the elected Delegate. It is the unanimous opinion of the Nominating Committee of the 91st Annual Session of the Missouri State Medical Association that Alternate Delegates should be active as understudies to their Delegates, so that they can intelligently replace their Delegate at any time as might normally be expected in the regular line of succession, thereby continually further the aims and objective of our Association. The Reference Committee on Resolutions is in agreement with this premise:

WHEREAS, The Alternate Delegates to the American Medical Association should not only be active in the administration policy and practices of the Missouri State Medical Association, but should have a constant working knowledge of, and be "on hand" students of the affairs of the House of Delegates of the American Medical Association, so that they can intelligently replace the Delegates at any time, and,

WHEREAS, It is believed that Alternate Delegates should attend each meeting of the House of Delegates of the American Medical Association, therefore be it

Resolved, That the expenses of the Alternate Delegates to the American Medical Association's meetings should be defrayed by the Missouri State Medical Association, on the same basis as those of the elected Delegates.

This resolution, as amended, is reported back to the House of Delegates with a recommendation that it be approved and directed to the Council of the Missouri State Medical Association for appropriate action and considered under the Budget, under Article X of the Constitution of this organization.

Upon second the motion carried.

DR. HALL: The House of Delegates in 91st Annual Session referred to the Reference Committee on Resolutions on March 28, 1949, during its Recessed Session, a resolution regarding the relocation of the present headquarters of the Missouri State Medical Association. This committee has considered the resolution and wishes to offer the following comments and recommendations.

1. The resolution, as presented, will involve a change in the Charter of the Missouri State Medical Association, as now constituted, but it is believed by the Reference Committee on Resolutions that a change is now under consideration by the Association, which, if enacted, will obviate this difficulty.

2. As stated and inferred by the resolution as submitted, the Reference Committee on Resolutions recognizes that the administration of Public Health and Welfare policies and service is and probably will continue to be increasingly centralized in the State Capitol at Jefferson City, Mo., as witnessed by the increasing function of the State Division of Health, and especially its activities under the Hill-Burton Act, re: Hospital Construction. In addition, there are being concentrated in the various State Capitols many headquarters of adjacent organizations to the Medical Profession, such as the State Organization of the American Cancer Society, as you have just heard, the State Social Security Headquarters, the Tuberculosis control programs, National Foundation of Infantile Paralysis, etc. There is considerable advantage to having this Association's headquarters closely allied with such organizations. It might well be that the headquarters of such organizations could be housed in the Association's building or offices to the mutual advantage of all, insofar as policy, administration and financial support are concerned. It is recognized that one of the prime duties and outstanding duties of its present Executive Secretary has been to keep the Association in constant contact with, and to render service to the Legislature of the State of Missouri; therefore, an appropriate headquarters building,



or offices, would seem from the long range point of view to be practical and advantageous.

3. In the event of some form of Federalized compulsory Health Insurance, the headquarters of the State Division of this program will undoubtedly be in the State Capitol cities. Although the enactment of such legislation is to be decried, as spread upon the records of the Annual Meeting of this Association by unanimous vote, it is conceivable that in the event of such a catastrophe the Association would be in a better position to salvage what remnants of its basic policies and functions of service possible to the individual under free enterprise, if its headquarters were immediately available.

4. The Committee recognizes that a function of the headquarters of this Association is to render the greatest service to the greatest number of physicians and people in our State by promoting the science and art of Medicine, in protecting the Public Health and the betterment of the Medical Profession, as well as to unite with similar organizations of other states and territories of the United States to form the American Medical Association. In this connection a review of the Roster by Counties, in the February 1949 issue of the JOURNAL of the Missouri State Medical Association indicates a total membership of 3,478, of whom roughly 700 are in the Kansas City-Jackson County area and similarly 1,650 are in the St. Louis-St. Louis County area, which indicates that approximately 50 per cent of the physician members are in the locale of the present headquarters; whereas, 20 per cent are in the Jackson County area, and the remaining 30 per cent are rather evenly distributed throughout the State.

5. The Reference Committee on Resolutions recognizes that the Missouri State Medical Association is at least a relatively permanent organization, and that its Officers, Standing and Special Committees will come and go, as do elected Secretaries and other personnel of this office, who are not necessarily members of the Missouri State Medical Association; however, fair and equitable consideration must be given to the present status of such personnel and their families and homes, and the result of an upheaval in their personal lives, in the event of a sudden movement to another city upon the administrative decision of this House of Delegates. Similarly, not only adequate office space or a new building program, but adequate facilities for their families would need to be assured. We have agreed and reiterated many times during this meeting of the Association that we now have one of the best and most efficient working offices that the Association has experienced. It is the opinion of your Committee that such a move with the above related upheaval to these valued assistants might be ill-timed and poor policy, if done precipitously in these times of required peak efficiency, superlative medical organization and enhanced public relations.

6. Article X of the Constitution of this Association requires all resolutions involving appropriation of funds to be referred to its Council, which is the Executive Body of the House of Delegates, that the cost involved may be approved by the Council and included in the Annual Budget, and plans made for raising funds by equal per capita assessment of each component Society, or assessment fixed by the House of Delegates.

7. Similarly, Chapter VI, Section II, of the By-Laws of this Association states: "The Council shall provide such headquarters for the Association as may be required to conduct its business properly."

8. The Reference Committee on Resolutions has studied this resolution in detail and feels constrained to point out to the House of Delegates that it is involved, and as presented it is pregnant with direction and authority. It would properly require, as pointed out above, a change in the Charter, the Constitution and By-Laws of this Association. The resolution, as presented and without change, is presented herewith:

WHEREAS, As a result of legislation over the years, the gov-

ernment of the State of Missouri is dealing with public health and the Practice of Medicine to an ever increasing extent, as is evidenced by the broader function of the State Division of Health and the activities under the Hospital construction act, Venereal Disease Control, Tuberculosis Control Program, Mental Hospitals administration, Dental Hygiene, Social Security, and

WHEREAS, All of these activities having to do with the public health in varying degree relate to the practice of medicine, and there is the probability of some kind of socialized medicine, and

WHEREAS, The Executive Offices directing these various activities are located at Jefferson City, Missouri, and

WHEREAS, Because of the increase in scope of such activities it is highly desirable that the headquarters of our Association should be located in Jefferson City, Missouri, so that the members of this Association and its employees may actively participate in all such matters pertaining to the health and welfare of the people of Missouri and the practice of medicine in this State, and keeping in close touch therewith, and that this can be most effectively done only by having the Association's headquarters located in Jefferson City; now, therefore be it

Resolved, That a committee of five members be appointed by the president to acquire suitable quarters in Jefferson City, Missouri, to house the Executive Offices of our Association; that the committee make a report of their investigation to the Council within six months of this date; that if adequate quarters that may be leased are found by the committee, the Council is directed and authorized to negotiate a lease satisfactory to it, for such quarters, and to move the headquarters of the Association from St. Louis to Jefferson City, Missouri; and that the Council be authorized and directed to furnish any funds necessary in connection therewith; and to take such funds from the General, or Reserve, Funds of the Society, as the Council may determine; be it further

Resolved, That the committee, however, shall report to the Council if it is unable to locate any suitable quarters for leasing, then, in that event, the committee shall investigate a suitable location that might be purchased by the Association on which a building might be erected for their headquarters, and report to the Council; that the Council in such event is directed and authorized to negotiate an option on this real estate and have plans prepared by an architect for a suitable building thereon; that all this shall be reported to the next regular session of the House of Delegates for action. If, however, the Council shall deem it necessary, a special meeting of the House of Delegates shall be called to consider and act upon any question necessary in the acquisition of the real estate and erection of the building for Association headquarters.

Thus ends the reading of the resolution, as submitted. The Reference Committee on Resolutions returns to the floor of the House this resolution with the above comments and recommendations that:

A. No action be taken by the House of Delegates at this time, insofar as actual adoption or rejection of the resolution as submitted, is concerned, and that that resolution be referred to the Council.

B. That a committee of three members be appointed by the Council to study the resolution over a longer period of time than can possibly be spent on it by the Resolutions Committee during the Annual Meeting of the Association, including all the implications, pros and cons, of said document, and the idea behind it, and that said committee shall report to the Council within three months of this date.

C. That the Council then take such action as it deems advisable predicated upon the favorable or unfavorable action of this committee with regard to this resolution, as limited by the present charter, constitution and by-laws, or to institute the necessary proceedings to change such articles as need to be to accomplish that action.

D. That the Council report the results of such findings through the ordinary media of the Minutes of its meetings and to the next regular session of the House of Delegates.

Mr. Speaker, I recommend the adoption of this report. Upon second, the recommendations were adopted.

The report of the Reference Committee on Reports of Officers, Council and Standing Committees was presented by Robert E. Schlueter, M.D., St. Louis, as follows:

#### REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS, COUNCIL AND STANDING COMMITTEES

On Monday the abbreviated report of the Committee



## CHECK LIST

for choice of  
a laxative

Phospho-  
Soda  
(FLEET)\*

TYPE OF  
ACTION

- ✓ Prompt action
- ✓ Thorough action
- ✓ Gentle action

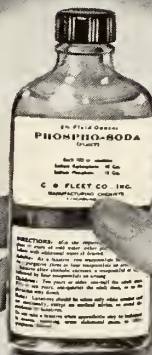
SIDE  
EFFECTS

- ✓ Free from Mucosal Irritation
- ✓ Absence of Constipation Rebound
- ✓ No Development of Tolerance
- ✓ Safe from Excessive Dehydration
- ✓ No Disturbance of Absorption of Nutritive Elements
- ✓ Causes no Pelvic Congestion
- ✓ No Patient Discomfort
- ✓ Nonhabituating
- ✓ Free from Cumulative Effects

ADMINIS-  
TRATION

- ✓ Flexible Dosage
- ✓ Uniform Potency
- ✓ Pleasant Taste

## Judicious Laxation



## through controlled action

Phospho-Soda (Fleet)\*, over the years, has won discriminating preference by thousands of physicians . . . because of its controlled action—its freedom from undesirable side effect—and its ease of administration. Your prescription of Phospho-Soda (Fleet)\* assures effective (and safe) results. Liberal samples on request.

**C. B. FLEET CO. INC.**  
LYNCHBURG, VIRGINIA

\*"PHOSPHO-SODA" and "FLEET" are registered trade-marks of C. B. Fleet Co., Inc.



TRADE REG. U. S. PAT. OFF. MARK  
**PHOSPHO-SODA**  
(FLEET)\*

Phospho-Soda (Fleet)\* is a solution containing in each 100 cc. sodium biphosphate 48 Gm. and sodium phosphate 18 Gm.

ACCEPTED FOR ADVERTISING BY THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

on Public Policy and Public Relations, as published in the pamphlet was returned to this committee. This committee has had a meeting with a majority of the members of the Committee on Public Policy and Public Relations, on Tuesday, March 29, and recommends that the following report be accepted by the House of Delegates as the full report of this latter Committee for 1948. This is quite a long report, starts in with a preface and goes on and involves the program for this committee for 1948, which period has already passed, and a suggestion for 1949, three months of which have already passed. Since that time the American Medical Association has assessed the members \$25.00, and we do not know just what their relationship will be toward the state associations. The plan was to cooperate with the state associations and with the component county societies. Therefore, practically all of this long report is past. Therefore, the standing committee on Public Policy and the Reference Committee both feel that the acceptance of that report would mean only the publication of it in *THE JOURNAL*, as part of the proceedings. The date of this report is September 12, 1948. That is the reason why our Reference Committee has recommended the acceptance of it. The report in full follows:

#### REPORT OF THE COMMITTEE ON PUBLIC POLICY AND PUBLIC RELATIONS

Business and Professional conduct are determined by the will of the people through enacted laws and accepted customs, and customs may be changed into laws by the will of the people.

The economic determination of the manner and methods of the distribution of medical care are decided by the public. Knowledge, education, training, and experience are the tools of the doctor. They are of little value unless they earn his family needs. The basic economic law of "Supply and Demand" is the equalizing factor. If the public is manifesting a desire for a change and it receives a majority support, either actively or passively, then there will be a change.

Changes in the economic factors in the distribution of medical care, made in collaboration with the seller of medical service, should result in achieving objectives for the greatest good in the public interest, according to public wishes. Medicine is an old profession. Honored heritages are teaching students, publishing successful remedies, administering to the ill and afflicted who are without funds and the welfare of the patient before personal gain.

Acceptance of prepaid hospitalization and medical care plans by the public have demonstrated that there is a demand for a change in medical economics. Whether this demand is an expression by the public that they desire a program of individual initiative and self responsibility and is a protest to higher costs of medical care or is an acceptance of a voluntary social experiment to use as a bargaining media in demanding political promises for a compulsory health program in exchange for their votes must be determined now.

The medical profession needs to assay public opinion and it needs to provide factual information in opposition to theoretical planning by persons who have not qualified by education in medicine to lead public opinion.

September 12, 1948

*To the Council of the  
Missouri State Medical Association*

Your committee respectfully submits the following report and recommendations.

Public relations is a continuing job. It calls for day-to-day planning and quick action, for a statement or a resolution that's worth page one today is stale news tomorrow.

The planning and execution of a public relations program is a professional job. Execution of this work must be under the direction of a person educated, experienced and trained in working with people who are re-

sponsible for making available the media for dissemination of information that is desirable to reach the public. Secretarial personnel experienced in this work is absolutely essential.

Definite statements of administrative responsibilities, adequate office space, equipment and expense responsibilities are essential and must be provided.

#### History

A public relations program recommended by the Council of the Missouri State Medical Association was adopted by the House of Delegates in 1944. The recommendation also explained that the cost of such a program would require additional funds. A special assessment of \$7.00 applicable to each member of the Association was suggested and adopted.

Confirmation of a contract with a public relations counsel was completed by the Council following this annual session. Immediate publicity releases were prepared and issued and the recommended public relations program, accepted by the Council in January, 1944 was placed in operation.

During the time the contract with the Public Relations Counsel was in effect material gains were made in releasing publicity and the cooperation for acceptance of publicity by media was enhanced. Considerable work was done on several of the recommended projects. Success was achieved in placing before the public the objectives and plans of the Missouri State Medical Association in the interest of the medical care of the people of Missouri.

Public Relations Counsel's contract was terminated three years later in 1947 following the Annual Session. Cost of the program and the attitude of the contractor may be considered causes of termination. The Council recommended that plans be made by the Public Policy and Relations Committee to continue the program. In the absence of obtaining employees or public relations Counsel the Executive Office staff has issued news releases and such other public relations activities as other duties permitted.

#### Recommendations

The action of the Council on this first recommendation will determine whether the remainder of the report shall be presented. In the interest of conserving your valued time we respectfully ask that the Chairman of the Council submit the following recommendation for your approval or disapproval:

Whereas the premise upon which the approval of a special assessment of \$7.00 per member and the raising of the dues to \$15.00 was the need for a public education program, and;

Whereas there are over 3,000 dues paying members of the Association and \$7.00 per member would represent a fund of approximately \$21,000.00, therefore; Your committee recommends that:

1. The Council authorize the allocation of the sum of \$5,000.00 for the period from October 1, 1948 and the sum of \$15,000.00 for the year of 1949 for the purpose of reactivating a public relations program to be directed by the Public Policy and Relations Committee through personnel that will be recommended by the committee for employment by the Council and who are to work in the Executive Office of the Association with other employees in order that all activities of the Association may be properly integrated.

2. Qualified persons trained and experienced in public relations be employed to direct this department and an experienced secretary in this field of work be employed.

3. Immediate survey to ascertain the attitude of congressional candidates toward Compulsory health insurance. Ascertain names of family physician or personal acquaintance.

4. Survey questionnaire to ascertain public attitude towards government sponsored health insurance. Prepare speakers bureau of members who can appear be-



fore civic clubs, churches, schools and non-medical groups and present a prepared talk and be prepared to answer questions. Write speeches.

5. Obtain an expression from the gubernatorial candidates concerning the School of Medicine of the University of Missouri and its continuance as a two year school or expansion as a four year school and the future location.

6. Preparation of news releases, speeches, and radio conferences should be developed from the information of these surveys.

7. Preparation of and mailing to each member of the Association at short intervals prior to November 2 all information that is received about candidates. Brief letters telling them about the education programs of the Association. Calling their attention to the necessity that they know what is being done to obtain best patient reaction and support. Urge the members to become active in community life and express opinion concerning health matters. Urge their attendance at Society and Councillor district meetings. Officers and committee members cannot be all over the state but members are all of the time.

8. Request that the Trustees of Missouri Medical Service reply to the letter submitted in the fall of 1947 containing the recommendations, of the Special Committee which were approved by the Council, for the correlation of the plan with Surgical-Medical Care. That immediate efforts be made to influence the adoption of these changes. Following their adoption all efforts be directed to publicizing the prepaid medical and surgical programs.

9. It is urged that such influence as is available be exerted to obtain an immediate consideration of the Blue Cross of St. Louis' program in the interest of stressing the benefits of the Hospitalization program in news releases and publicity by the Association.

(The last two recommendations reiterate a recommendation of the Public Policy and Relations Committee two years ago in order that a publicity program on the prepaid hospital and medical plans could be presented thrifly without developing two sets of releases and to eliminate confusion to the public.)

10. Your committee recommends the study of the Public Relations program presented in 1944 by the previous Counsel. Also the material presented to the Council in 1943 when a Public Relations Program was recommended. This material should be evaluated by the new director or counsel and wherever possible those that are in progress be continued or revised and preparations begun to immediately activate others.

Upon motion of Dr. Carl F. Vohs, St. Louis, the report was referred to the Council.

Upon motion, duly seconded, the report of the Reference Committee on Reports of Officers, Council and Standing Committees was accepted.

The report of the Committee on Scientific Exhibits, J. S. Gashwiler, M.D., Novinger, Chairman, follows:

#### REPORT OF THE COMMITTEE ON SCIENTIFIC EXHIBITS

First, Photographic Study of Cancer Before and After Treatment, E. Kip Robinson, M.D., Kansas City.

Second, Cancer in Children, Harry M. Gilkey, M.D., William Crouch, M.D.; Forest Cornwall, M.D., Thomas L. Draney, M.D., and David Howard, M.D., Kansas City.

Third, Rehabilitation Institute, Kansas City.

The report of the Committee on Technical Exhibits, J. M. Threadgill, M.D., Forsyth, Chairman, follows:

#### REPORT OF THE COMMITTEE ON TECHNICAL EXHIBITS

First, Eli Lilly & Company, Indianapolis.

Second, Abbott Laboratories, North Chicago.

Third, G. D. Searle & Co., Chicago.

Upon motion, duly seconded, the House of Delegates adjourned *sine die*.

## MISSOURI STATE MEDICAL ASSOCIATION REGISTRATION AT NINETY-FIRST ANNUAL SESSION

March 27, 28, 29, 30, 1949

### First Councillor District—62

Allen, Erroll W., Tina  
Andrews, Berneil W.,  
St. Joseph  
Atwood, J. Morris, Carrollton  
Bailey, William H., Excelsior  
Springs  
Baird, J. E., Excelsior  
Springs  
Bauman, Henry C., Maryville  
Bloomer, G. T., St. Joseph  
Booth, Herbert R., Hamilton  
Bristow, A. S., Princeton  
Bristow, George B., Princeton  
Bristow, R. B., Kansas City  
Broyles, W. A., Bethany  
Buck, Ronald, St. Joseph  
Brumm, H. J., St. Joseph  
Carle, H. W., Jr., St. Joseph  
Chiariottino, J. F., St. Joseph  
Craig, Owen W. D., St. Joseph  
Cullers, Charles H., Trenton  
Dawson, John W., Eldorado  
Springs  
Dawson, Lerton V., Excelsior  
Springs  
Day, Maxwell, St. Joseph  
Dowell, Donald M.,  
Chillicothe  
Dowell, H. S., Chillicothe  
Duffy, E. A., Trenton  
Fisher, Joseph L., St. Joseph  
Forgrave, J. R., St. Joseph  
Forgrave, L. Paul, St. Joseph  
Fuson, William A., Trenton  
Geiter, Clyde W., North  
Kansas City  
Goodson, W. H., Liberty  
Grant, C. S., St. Joseph

Grimes, M. E., St. Joseph  
Hamilton, Buford G.,  
Richmond  
Hendren, Glenn W., Liberty  
Herman, Allen I., St. Joseph  
Hobbs, Earl B., Smithville  
Houck, Russell M., Excelsior  
Springs  
Imes, Elvin D., Maryville  
Jackson, William R.,  
Maryville  
Kulowski, J., St. Joseph  
Lau, G. A., St. Joseph  
McCracken, S. R., Excelsior  
Springs  
McDaniel, J. R., St. Joseph  
McDonald, Wilbur P.,  
St. Joseph  
Mairs, E. J., Trenton  
Matteson, Frank B., Grant  
City  
Moore, W. Roger, St. Joseph  
Petersen, H. E., St. Joseph  
Pickett, Clarence, Princeton  
Quisito, Joseph M., Trenton  
Reed, Carl H., Carrollton  
Rosenthal, I. I., St. Joseph  
Ross, Pren J., Grant City  
Senor, S. Earl, St. Joseph  
Spelman, A. E., Smithville  
Spencer, Floyd H., St. Joseph  
Stamey, James T., St. Joseph  
Wadlow, Ernest E., St. Joseph  
Wempe, George R., Tarkio  
Werner, G. H., St. Joseph  
Wilbur, C. H., Polo  
Wilson, Fred K., Winston

### Second Councillor District—22

Bridges, J. R., Kahoka  
Davis, H. H., Rolla  
Davis, Landis Y., Canton  
Dixon, John R., Brookfield  
Eggleston, D. E., Macon  
Fleming, Thomas S., Moberly  
Francka, W. F., Hannibal  
Freeman, Spencer L.,  
Kirksville  
Gashwiler, J. S., Novinger  
Goodrich, H. B., Hannibal  
Greene, Harry L., Hannibal

Hawkins, G. W., Salisbury  
Hornback, George A.,  
Hannibal  
Huber, Lasley E., Moberly  
Jennings, P. W., Canton  
Landau, D. B., Hannibal  
Montgomery, J. S., Milan  
Murphy, B. L., Hannibal  
Newton, Henry O., LaPlata  
Rice, G. C., Kansas City  
Rowlette, A. P., Moberly  
Smith, Robert W., Marceline

### Third Councillor District—84

Allen, Henry C., St. Louis  
Allen, Hollis N., St. Louis  
Atkinson, William J., Jr.,  
St. Louis  
Bagby, James W., St. Louis  
Beam, Sim F., St. Louis  
Bell, Robert, St. Louis  
Bettoville, Paul J., Jr.,  
St. Louis  
Bieri, Earl J., St. Louis  
Britt, Robert E., St. Louis  
Brown, C. O., St. Louis  
Brown, James Barrett,  
St. Louis  
Burns, Francis J., St. Louis  
Burst, Emil A., St. Louis  
Carroll, George A., St. Louis  
Conrad, Adolph H., St. Louis  
Coughlin, Bertrand D.,  
St. Louis  
Danis, Peter G., St. Louis  
Day, Anthony B., St. Louis  
Dorsett, E. Lee, St. Louis  
Eber, Carl T., St. Louis  
Echterhoff, Harry R.,  
St. Louis  
Engman, Martin F., Jr.,  
St. Louis  
Ernst, E. C., St. Louis  
Fries, Armand D., St. Louis  
Fryer, Minot P., St. Louis  
Gay, Lee Pettit, St. Louis  
Grindon, Joseph B., Jr.,  
St. Louis  
Hanser, S. Albert, St. Louis  
Hassett, Henry A., St. Louis

Henschel, F. V., St. Louis  
Henske, Andrew C., St. Louis  
Hines, Paul, Webster Groves  
Javaux, Everett J., St. Louis  
Jones, Andrew B., St. Louis  
Jones, Vincent L., St. Louis  
Jostes, Frederick A.,  
St. Louis  
Katz, Samuel D., St. Louis  
Kienzie, Edw. C., St. Louis  
Klein, Harry A., St. Louis  
Klenk, Charles L., St. Louis  
Koon, Bernard T., St. Louis  
Kountz, William B., St. Louis  
Leighton, William E.,  
St. Louis  
Luten, Drew W., St. Louis  
McElvain, Robert C.,  
St. Louis  
Martin, Charles E., St. Louis  
Miloslavich, E. L., St. Louis  
Moore, Neil S., St. Louis  
Moragues, Vicente, St. Louis  
Morris, Mary E., St. Louis  
Mueller, Robert, St. Louis  
Muether, R. O., St. Louis  
Neilson, A. W., St. Louis  
Neilson, C. H., St. Louis  
Northup, Glenn R., St. Louis  
Norton, William H., St. Louis  
O'Dowd, James A., St. Louis  
Ohmoto, Masao, St. Louis  
Patton, John F., St. Louis  
Pernoud, Flavius G., St. Louis  
Raemdonck, A. J., St. Louis  
Ramos, Raoul L., St. Louis

Sale, Llewellyn, St. Louis  
Scherman, Victor E., St. Louis  
Schlueter, Robert E., St. Louis  
Schnoebelen, Paul C.,  
St. Louis  
Schumacher, C. W., St. Louis  
Sciortino, John S., St. Louis  
Signorelli, A. J., St. Louis  
Sinner, Bernard L., St. Louis  
Smolik, Edmund A., St. Louis  
Starkloff, Gene B., St. Louis  
Strauss, Arthur E., St. Louis  
Thoma, George E., Jr.,  
St. Louis

#### Fourth Councilor District—26

Blackman, N., Kirkwood  
Brown, Eugene R.,  
University City  
Compton, J. Roy, St. Louis  
Damron, E. O., Elsberry  
Denny, Robert B.,  
University City  
Dowd, J. F., Jr., St. Louis  
Dyer, Clyde P., St. Louis  
Gaines, Quentin M.,  
Kirkwood  
Howe, L. F., St. Louis  
Jacobs, C. E., St. Louis  
Jensen, Julius, St. Louis  
Johnson, Grover C.,  
Marthasville  
Koch, Otto W., St. Louis

Thompson, J. William,  
St. Louis  
Vohs, Carl F., St. Louis  
Von Kaenel, Joseph E.,  
St. Louis  
Wachter, H. E., St. Louis  
Webb, Lewis M., St. Louis  
Weiss, Richard S., St. Louis  
Witt, Clyde M., St. Louis  
Woolsey, Robert D., St. Louis  
Youngman, George A.,  
St. Louis  
Zeinert, Oliver B., St. Louis

McIntire, Landon R.,  
St. Charles  
McNearney, Joseph, St. Louis  
Mears, Frank G., Washington  
O'Connell, John, St. Louis  
Schmidt, Herbert H.,  
Marthasville  
Sharp, Cecil A. Z., St. Louis  
County  
Skilling, D. M., Jr., St. Louis  
Steiner, A. J., St. Louis  
Sterling, J. A., Maplewood  
Strehlman, B. G., Union  
Vitale, Nicholas, Normandy  
Walther, Roy, Sr., Overland  
Whitener, Paul R., Overland

#### Fifth Councilor District—43

Adams, C. F., Jefferson City  
Allee, James W., Columbia  
Allee, W. L., Eldon  
Baskett, Edgar D., Columbia  
Belden, E. A., Jefferson City  
Bloom, W. A., Fayette  
Bradford, Oscar F., Columbia  
Bruner, Claude R., Columbia  
Burke, John P., Jr.,  
California  
Cooper, Maurice E., Columbia  
Cremer, W. J., Fulton  
Crews, R. N., Fulton  
Curtner, Lewis D., Versailles  
Dean, F. D., Fayette  
Dwyer, Thomas L., Mexico  
Garner, Lynn M., Jefferson  
City  
Gillham, F. W., Jefferson City  
Gunn, A. J., Versailles  
Humphreys, Edward T., Pilot  
Grove  
Jolley, J. F., Mexico  
Kibbe, E. A., California  
Krause, Irl B., Jefferson City

Latham, Kenyon S.,  
California  
Latham, Logan L., California  
Loyd, E. L., Jefferson City  
McCall, W. K., Laddonia  
McComas, A. R., Sturgeon  
Neal, M. Pinson, Columbia  
Nifong, Frank G., Columbia  
Overholser, Milton D.,  
Columbia  
See, William B., Columbia  
Settle, Emmett B., Rock Port  
Shaw, William J., Fayette  
Shull, G. D., Jefferson City  
Stauffer, H. B., Jefferson City  
Stephan, A. P., Jefferson City  
Stewart, William J., Columbia  
Stuart, Byron M., Boonville  
Sugarbaker, Everett D.,  
Jefferson City  
Summers, J. S., Jefferson City  
Washburn, J. L., Versailles  
Wittels, Theo. S., Jefferson  
City  
Wood, George F., Fulton

#### Sixth Councilor District—47

Aiken, George A., Marshall  
Allen, Claude J., Rich Hill  
Allen, W. H., Nevada  
Allen, William H., Jr., Hume  
Barger, O. B., Harrisonville  
Barone, Paul, Nevada  
Brady, Hugh, Concordia  
Blackmore, T. A., Windsor  
Campbell, Albert J., Sedalia  
Cooper, John M., Butler  
Davis, C. B., Nevada  
Edwards, D. R., Sedalia  
Ellis, Frank, Garden City  
Glenn, David H., Warsaw  
Hansen, A. L., Butler  
Haynes, R. C., Marshall  
Hite, Henry A., Green Ridge  
Hollingsworth, R. S., Clinton  
Johnson, Charles S.,  
Warrensburg  
Kelling, Jordan, Waverly  
Kennedy, R. W., Marshall  
Koppenbrink, W. E.,  
Higginsville  
LaHue, L. D., Butler  
Lawless, Charles L., Marshall

Long, David S., Harrisonville  
Lusk, Charles A., Jr., Butler  
Luter, Carter W., Butler  
McBurney, C. A., Slater  
Maples, Floyd H., Marshall  
Martin, Wilfred E., Odessa  
Maxson, T. Reed,  
Warrensburg  
Mitchell, John E., Sedalia  
Monroe, A. E., Sedalia  
Parker, Harry F.,  
Warrensburg  
Pearse, R. W., Nevada  
Robinson, Edward E., Adrian  
Schooley, R. C., Odessa  
Shy, Milton P., Sedalia  
Siegel, Carl D., Sedalia  
Siegel, P. V., Smithton  
Stauffer, C. Gordon,  
Sedalia  
Thompson, William G.,  
Holden  
Tracy, H. A., Belton  
Trader, Charles B., Sedalia  
Walker, George S., Clinton  
Wall, H. M., Windsor

#### Seventh Councilor District—235

Ahlefeld, Charles B., Kansas  
City  
Aisenstadt, B. Albert, Kansas  
City  
Allebach, H. K. B., Kansas  
City  
Allen, Charles E., Kansas City  
Allen, William B., Kansas  
City

Altringer, A. N., Kansas City  
Anderson, Raymond B.,  
Kansas City  
Anderson, Richard W.,  
Kansas City  
Aschman, T. H., Kansas City  
Asher, Arthur G., Kansas City  
Atcheson, Bellfield, Kansas  
City

Atwell, Floyd C., Kansas City  
Baer, A. J., Kansas City  
Ball, James E., Kansas City  
Beal, Homer A., Kansas City  
Becker, Richard R., Kansas  
City  
Bennett, James D., Kansas  
City  
Bennett, J. S., Kansas City  
Bergmann, Victor H., Kansas  
City  
Berry, Maxwell G., Kansas  
City  
Bills, Marvin L., Kansas City  
Bohan, Peter T., Kansas City  
Boughnou, Harvey P., Kansas  
City  
Bourke, T. S., Kansas City  
Boutros, Amin, Kansas City  
Brams, Jack B., Kansas City  
Broyles, Glen H., Kansas City  
Brumm, Lawrence W.,  
Kansas City  
Bruner, Robert E., Kansas  
City  
Budke, Harold A., Kansas  
City  
Buhler, Victor B., Kansas City  
Bunting, W. P., Kansas City  
Caldwell, John K., Kansas  
City  
Callaway, L. M., Kansas City  
Campbell, F. B., Kansas City  
Capell, Clarence, Kansas City  
Carlson, Hjalmar E., Kansas  
City  
Carmichael, F. A., Kansas  
City  
Carmichael, F. A., Sr., Kansas  
City  
Carrier, Edson C., Kansas  
City  
Casebolt, Milton B., Kansas  
City  
Casford, Ralph S., Kansas  
City  
Castelaw, Rush E., Kansas  
City  
Chambers, J. Q., Kansas City  
Clasen, A. C., Kansas City  
Coffey, Ralph R., Kansas City  
Coffin, Theo. A., Kansas City  
Cortner, Mary C., Kansas  
City  
Counsell, C. M., Kansas City  
Cowherd, Joseph B., Kansas  
City  
Cox, Kenneth E., Kansas City  
Curran, Kevin, Kansas City  
Dann, David S., Kansas City  
Darnell, Thomas F. B., Little  
Rock, Ark.  
Davis, Jack M., Raytown  
DeVilbiss, E. F., Kansas City  
DeWeese, E. R., Kansas City  
Diveley, Rex, Kansas City  
Dixon, O. Jason, Kansas City  
Donaldson, J. Earle, Kansas  
City  
Downey, James W., Kansas  
City  
Draney, T. E., Kansas City  
Duncan, Ralph E., Kansas  
City  
Duncan, William H., Kansas  
City  
Dwyer, Hugh L., Kansas City  
Eldridge, Charles J., Kansas  
City  
Elliott, B. Landis, Kansas  
City  
Elliott, Raymond G., Kansas  
City  
Eubank, A. E., Kansas City  
Eubank, Dillard M., Raytown  
Eubank, William R., Kansas  
City  
Feist, George V., Kansas City  
Ferguson, E. H., Kansas City  
Ferris, Carl R., Kansas City  
Fitzgerald, Robert H., Kansas  
City  
Fitzwilliam, C. D., Kansas  
City  
Flanders, Horace F., Kansas  
City  
Frick, John Paul, Kansas  
City  
Friedman, Morris L., Kansas  
City  
Ganley, William C., Kansas  
City

Gard, Raymond F.,  
Independence  
Gay, Ray J., Kansas City  
Gestring, Hugh A., Kansas  
City  
Gilkey, Harry M., Kansas City  
Gilles, C. L., Kansas City  
Gillmore, Charles S., Kansas  
City  
Ginsberg, Edward L., Kansas  
City  
Gist, W. L., Kansas City  
Gist, William W., Kansas City  
Glasscock, Ernest L., Kansas  
City  
Goldman, Max, Kansas City  
Goldman, Stanley L., Kansas  
City  
Goodman, Leroy, Kansas City  
Goodson, William H., Jr.,  
Kansas City  
Grabske, Charles F.,  
Independence  
Graham, James W., Kansas  
City  
Green, John R., Independence  
Growdon, John A., Kansas  
City  
Hall, Thomas B., Kansas City  
Hardacre, Ruth Anna, Kansas  
City  
Harless, M. S., Kansas City  
Haynes, Solon E., Kansas  
City  
Heller, B. Marcus, Kansas  
City  
Hermann, George V., Kansas  
City  
Hess, H. Lewis, Kansas City  
Hickerson, William H.,  
Independence  
Hill, Jack H., Kansas City  
Hink, Frederick W.,  
Fairmount  
Hoepfer, Samuel D., Kansas  
City  
Hoffman, Jacob S., Kansas  
City  
Hoffmann, R. Lee, Kansas  
City  
Howard, John C., Jr., Kansas  
City  
Hunt, C. J., Kansas City  
Jansen, Robert, Kansas City  
Johnson, C. Lawrence, Kansas  
City  
Johnson, Paul A. G., Kansas  
City  
Johnson, Thomas M., Kansas  
City  
Johnstone, Paul N., Kansas  
City  
Jones, George H., Kansas City  
Jones, Kneeland P., Kansas  
City  
Jones, T. Reid, Kansas City  
Kantor, Julius M., Kansas  
City  
Keeling, Irene C., Kansas City  
Kelly, Eugene H., Kansas  
City  
Kene, Richard H., Kansas  
City  
Kent, Clifford F., Kansas City  
Kerr, Russell W., Kansas City  
Ketchem, William M., Kansas  
City  
Kienberger, P. A., Kansas  
City  
Kleping, Dayton P., Kansas  
City  
Knight, John S., Kansas City  
Knight, Lyle B., Lees Summit  
Knoch, H. Kermit, Kansas  
City  
Kovitz, Louis, Kansas City  
Kyner, Thomas, Kansas City  
Lafoon, F. L., Raytown  
Lapp, John G., Kansas City  
Latham, Raymond W.,  
Kansas City  
Lee, Chester E., Kansas City  
Leitch, C. G., Kansas City  
Levey, Harry B., Kansas City  
Lieberman, B. Albert,  
Kansas City  
Lieberman, B. Albert, Jr.,  
Kansas City  
Link, Vance E., Independence  
Long, Robert S., Kansas City  
Lundgren, Fred, Kansas City  
McAlester, A. W., Kansas  
City



# COSMO CAUTERY COMPANY

4215 Virginia Ave.

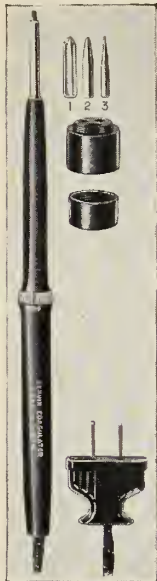
St. Louis 11, Mo.

## COSMO CERVIX COAGULATOR

Cervical treatment by electro-coagulation with this unit is superior to other methods because the doctor can control the extent of coagulation and reach the deeply imbedded infections.

This unit will not create nauseating smoke and odor due to searing tissue and gives the doctor greater freedom of post-operative complications such as stenosis, excessive scar tissue, etc.

Furnished with leatherette carrying case and 3 interchangeable silver applicators for striping, spotting and puncturing.



Only \$26.50  
Complete

## COSMO CAUTERY UNIT

Removal of verucca, nevi, etc., with a Cosmo Cautery Unit provides a gentle, effective office treatment with a minimum of patient discomfort.

The unit is easy to operate; technic requires no anesthetic; heat is controlled and device shockproof. Usable around eyes and hairline; will not cause scar tissue.

Furnished with leatherette carrying case and 5 interchangeable silver applicators. The applicators are graduated in sizes to handle various sized blemishes and assure even sloughing.



Only \$22.50  
Complete

ONE YEAR GUARANTEE

Ask Your Dealer for Descriptive Literature

ST. LOUIS  
A. S. Aloe Co.  
Hamilton-Schmidt Co.  
Edmund F. Hanley Co.  
Charles A. Schmidt Co.

KANSAS CITY  
A. S. Aloe Co.  
Chas. Russell Co. Inc.  
Goetze-Niemer Co.

JOPLIN  
Goetze-Niemer Co.  
ST. JOSEPH  
Goetze-Niemer Co.

# The Norbury Sanatorium

Established 1901—Incorporated—  
Licensed—Jacksonville, Illinois

• ALBERT H. DOLLEAR, B.S., M.D., Superintendent. FRANK GARM NORBURY, A.M., M.D., Medical Director. SAMUEL N. CLARK, M.D., Physician. HENRY A. DOLLEAR, M.D., Physician.



## Maplecrest

• Pictured above — Restful, congenial home-like surroundings are combined with the most modern diagnostic and therapeutic equipment.



## Maplewood

• Pictured at left — Most comfortable homes for individuals requiring rest, scientific diagnosis and treatment. Fireproof construction.

McAlester, A. W., Jr., Kansas City  
McCunniff, William F., Kansas City  
McPherson, Owen P., Kansas City  
McVay, James R., Kansas City  
MacInnis, Florence E., Kansas City  
Maddux, James, Kansas City  
Major, Hermon S., Kansas City  
Mantz, H. L., Kansas City  
Marks, Mark M., Kansas City  
Miller, Clint L., Lees Summit  
Miller, Gerald L., Kansas City  
Miller, Wade H., Kansas City  
Monahan, Elmer P., Kansas City  
Morest, F. Stanley, Kansas City  
Morrow, Raymond L., Kansas City  
Moss, Paul, Kansas City  
Mueller, Martin J., Kansas City  
Mullen, Leo M., Kansas City  
Murphy, Robert J., Kansas City  
Nigro, D. M., Kansas City  
Nunn, P. M., Kansas City  
O'Brien, Raymond W., Kansas City  
Oglevie, Rial R., Kansas City  
O'Neil, James H., Kansas City  
Owens, Robert H., Kansas City  
Pearson, Paul E., Kansas City  
Peete, Carlos Don, Kansas City  
Pendleton, George F., Kansas City  
Pierron, John B., Kansas City  
Pipkin, F. G., Kansas City  
Polk, George M., Independence  
Potter, L. G., Kansas City  
Printz, Otto J., Kansas City  
Quistgard, P. C., Kansas City  
Rader, Ada B., Martin City  
Reitz, Carl H., Kansas City  
Ridge, Frank I., Kansas City  
Rinkel, Herbert J., Kansas City  
Rising, Jesse D., Kansas City  
Roberts, Harold M., Kansas City  
Robinson, David W., Kansas City  
Robinson, E. Kip, Kansas City  
Robinson, G. Wilse, Kansas City  
Robinson, G. Wilse, Jr., Kansas City  
Schutz, Richard B., Kansas City

#### Eighth Councilor District—63

Arnold, Herbert M., Lamar  
Beatie, William R., Springfield  
Beers, Ellsworth G., Seymour  
Black, Mervin H., Joplin  
Blanke, O. T., Joplin  
Bowman, Melvin C., Neosho  
Brasher, Charles A., Mt. Vernon  
Busiek, U. J., Springfield  
Byrd, Homer E., Carthage  
Cain, Alvin R., Greenfield  
Cardwell, C., Stella  
Coffelt, Kenneth C., Springfield  
Conrad, R. C., Springfield  
Cowan, W. O., Greenfield  
Davis, Paul C., Neosho  
DeTar, B. E., Sr., Joplin  
Donley, Robert R., Monett  
Duncan, Robert D., Springfield  
Farthing, Gene W., Springfield  
Ferguson, John P., Springfield  
Ferrell, T. R., Springfield  
Freeman, H. E., Springfield  
Freeman, S. F., Springfield  
Glenn, E. E., Springfield  
Glover, Kenneth, Mt. Vernon  
Graves, Arthur J., Mt. Vernon

Shapiro, L. M., Kansas City  
Schaerrer, Hans, Kansas City  
Schaerrer, William C., Kansas City  
Schauffler, Robert McE., Kansas City  
Sheldon, John G., Kansas City  
Shuey, Herbert H., Kansas City  
Shumate, D. L., Kansas City  
Simpson, Morris B., Kansas City  
Singleton, J. M., Kansas City  
Smith, Arthur B., Kansas City  
Spafford, Allen L., Kansas City  
Steffen, L. F., Kansas City  
Stockwell, A. L., Kansas City  
Strong, Richard, Kansas City  
Sutton, Richard L., Kansas City  
Tarson, Solomon S., Kansas City  
Thiessen, E. H., Kansas City  
Thomason, Henry E., Kansas City  
Trippe, Harrison C., Kansas City  
Trowbridge, Ellsworth H., Kansas City  
Tuthill, Herbert, Kansas City  
Tuttle, Floyd W., Kansas City  
Twyman, Richard A., Kansas City  
Valentine, Herbert S., Kansas City  
Vanorden, Herbert F., Kansas City  
Viriden, C. Edgar, Kansas City  
Viriden, Herbert H., Kansas City  
Wakefield, F. H., Kansas City  
Wallace, Meriam, Kansas City  
Walthall, D. O., Kansas City  
Watson, Ethel, Independence  
Webster, Joseph G., Kansas City  
Welker, Joseph E., Kansas City  
White, Charles H., Kansas City  
White, E. C., Kansas City  
Whitman, Doyle C., Kansas City  
Williams, D. A., Kansas City  
Williams, V. T., Kansas City  
Willits, Lyle G., Kansas City  
Willoughby, J. B., Kansas City  
Wilson, Clifford C., Kansas City  
Wilson, F. I., Kansas City  
Wortmann, Robert F., Kansas City  
Ziegler, A. Melvin, Kansas City

Hall, Durward G., Springfield  
H'Doubler, F. T., Springfield  
Hoover, H. Lee, Springfield  
Isbell, Charles H., Carthage  
James, Edward D., Joplin  
Jeans, Virgil, Joplin  
Johnston, Joseph L., Springfield  
Kerr, Frank T., Monett  
Knabb, Kenneth E., Springfield  
Lentz, Harold C., Neosho  
Maddonell, C. R., Marshfield  
McCallum, A. J. C., Aurora  
McIntire, Emery J., Carthage  
Neff, Robert L., Joplin  
Park, William I., Springfield  
Plummer, G. C., Buffalo  
Reid, Charles T., Joplin  
Rigney, L. M., Springfield  
Sartin, John M., Springfield  
Schwartz, Eugene, Springfield  
Sorce, S. W., Joplin  
Sewell, W. S., Springfield  
Silsby, Harry D., Springfield  
Simpson, E. L., Springfield  
Slentz, E. L., Joplin  
Smith, C. Souter, Springfield  
Smith, Wallis, Springfield  
Threadgill, J. M., Forsyth  
Tillman, W. W., Jr., Bolivar  
Vail, A. Denton, Springfield

Webb, Leslie R., Springfield  
West, William M., Monett  
Whitehead, F. F., Neosho  
Whitten, M. Foster, Carthage  
Williams, John W., Jr., Springfield

#### Ninth Councilor District—17

Bohrer, E. C., West Plains  
Breuer, R. E., Newburg  
Burns, T. J., Houston  
Callahan, C. F., West Plains  
Cooper, Claude W., Thayer  
Cotton, T. W., Van Buren  
Cramer, Quentin, Camdenton  
Denney, Richard W., Mountain Grove  
Frame, Homer G., Mountain Grove

Wommack, Fred L., Crane  
Yancey, Daniel L., Springfield  
York, William, Sarcoxie  
Harrell, R. E., Lebanon  
Hogg, Garrett, Jr., Cabool  
Hurst, Ben B., Lebanon  
Lytle, William R., Waynesville  
Ryan, R. A., Mountain Grove  
Smith, Rollin H., West Plains  
Stricker, E. A., Rolla  
Underwood, M. K., Rolla

#### Tenth Councilor District—12

Baldwin, Paul, Kennett  
Barron, W. Harry, Fredericktown  
Bull, Ben, Ironton  
English, W. D., Cardwell  
Estes, A. M., Jackson  
Finney, W. O., Chaffee  
Hall, Frank, Cape Girardeau

Killion, John J., New Madrid  
Roberson, John, Hayti  
Roebber, Harry M., Bonne Terre  
Yoskit, Harry, Festus  
Zimmermann, Carl A. W., Cape Girardeau

#### Guest Speakers—12

Barker, Paul S., Ann Arbor, Mich.  
Bay, E. B., Chicago, Ill.  
Bisgard, J. Dewey, Omaha, Nebr.  
Braude, A. I., Minneapolis, Minn.  
Colwell, Arthur R., Evanston, Ill.  
Foley, William T., New York, N. Y.

Ivy, A. C., Chicago, Ill.  
Lock, Frank R., Winston-Salem, N. C.  
Mahorner, Howard, New Orleans, La.  
Overholser, Winfred, Washington, D. C.  
Roberts, Joseph T., Batavia, N. Y.  
Woods, Francis M., Brookline, Mass.

#### Visiting Physicians—99

Aldrich, J. Frank, Clarinda, Ia.  
Armstrong, N. L., Kansas City  
Austin, A. T., Kansas City  
Barry, John W., Kansas City  
Bawell, Malcom B., Clayton  
Berger, Dan L., Kansas City  
Berlin, Louis, Topeka, Kan.  
Bikales, Victor W., Topeka, Kan.  
Blair, William F., Topeka, Kan.  
Boyle, J. S., Kansas City  
Bradford, William L., Rochester, N. Y.  
Bridges, G. G., Kansas City  
Brown, Charles, Topeka, Kan.  
Brown, Robert, Kansas City  
Bruce, Paul C., Excelsior Springs  
Buckner, Robert C., Kansas City  
Burns, B. I., Kansas City  
Coleman, William, Kansas City  
Connor, S. W., Blue Springs  
Cornwell, Forest A., Kansas City  
Crouch, William H., Kansas City  
Cutcliff, D. J., Kansas City  
Davidson, O. W., Kansas City, Kan.  
Doering, Robert, Kansas City  
Eubank, D. F., Kansas City  
Feldman, Edward G., Topeka, Kan.  
Furniss, C. O., Topeka, Kan.  
Gier, Jacob B., Topeka, Kan.  
Gillfillan, Charles, Hollywood, Calif.  
Gilpin, D. C., Kansas City  
Gilpin, C. R., Kansas City  
Hancock, Howard R., Kansas City  
Hatton, L. W., Salina, Kan.  
Herz, Jim, Kansas City  
Hicks, Howard K., Kansas City  
Hodge, Robert, Kansas City  
Holman, Frank, Kansas City  
Holmgren, Robert B., Kansas City

Horton, Charles, Columbia, Mo.  
Howard, D. S., Kansas City  
Ivy, Henry B., Sunflower, Kansas  
Jacka, E. Russell, Halstead, Kan.  
Jenkins, John, St. Louis  
Kerr, C. C., Council Grove, Kan.  
Kiene, Richard H., Jr., Kansas City  
Knight, Edward H., Topeka, Kan.  
Knowles, Roy C., Topeka, Kan.  
Knox, A. C., Kansas City  
Kratz, Paul, Kansas City  
Kurth, C. J., Wichita, Kan.  
La Tourrette, Jackie, Kansas City  
Lin, T. K., Kansas City  
Linville, Howard, Kansas City  
Lockwood, Franklin M., Kansas City  
McGuire, J. W., Neodesha, Kan.  
McLean, Harry, Kansas City  
McMurray, E. A., Newton, Ia.  
Makous, Norman, Kansas City  
Mantell, F. J., Excelsior Springs  
Marshall, Arthur, Topeka, Kan.  
Merker, Frank F., Topeka, Kan.  
Meyers, Harold L., Topeka, Kan.  
Mitchell, J. W., Merriam, Kan.  
Modlin, Herbert C., Topeka, Kan.  
Moore, Inghram, St. Louis  
Mothershead, J. L., Denton, Kan.  
Murphy, Jerry, Kansas City  
Murphy, T. W., Bristol, S. D.  
Musgrave, P. W., Kansas City  
Neighbor, G. P., Kansas City, Kan.



Niedermeyer, Fred. F.,  
Kansas City  
Nyberg, Charles, Kansas City  
Owens, William A.,  
Mountevideo, Minn.  
Pardell, Seymour S., Topeka,  
Kan.  
Parrish, Edward E.,  
Excelsior Springs  
Pucci, G. L., Kansas City  
Purcell, Elmer M., Jr.,  
Kansas City  
Reinhardt, George R., Kansas  
City  
Ridings, Harold D., Kansas  
City  
Rinne, Ralph H., Kansas City  
Rives, Chalmers, Topeka,  
Kan.  
Robbins, Lewis L., Topeka,  
Kan.

### Exhibitors

Allen, P. T., Kansas City  
Anderson, R. L., Kansas City  
Baker, Lea, New York  
Balch, Virginia, Kansas City  
Barfoot, M., St. Joseph  
Bartee, H. E., Chicago, Ill.  
Bell, Don, Kansas City  
Benson, Dorothy, Kansas City  
Benton, E., Kansas City  
Bergstrom, M. H., Chicago,  
Ill.  
Bond, B. C., Kansas City  
Boyle, Leroy, Kansas City  
Braden, T. E., Kansas City  
Breckenkamp, A. W.,  
St. Louis  
Brown, A. Elmore, St. Louis  
Bruce, C. H., Kansas City  
Brunkhorst, Ruth, Kansas  
City  
Charron, C. H., Kansas City  
Clough, Robert, Jefferson  
City  
Coulter, W. M., Evansville,  
Ind.  
Crawford, E. V., St. Louis  
Daley, G. J., Connecticut  
Dinyer, George, St. Louis  
Donahue, Charles, New York  
Ebeling, Louis J., Kansas City  
Ensign, Paul, Kansas City  
Ericson, C. E., Kansas City  
Feeley, W. J., Alexandria,  
Va.  
Ford, Glenn, Kansas City  
Fossieck, B. E., St. Louis  
Foster, Howard, St. Louis  
Frederick, L. H., Kansas City  
Friedrich, L. H., Kansas City  
Fritts, Ralph M., Kansas City  
Fryer, Robert, St. Louis  
Gantt, Ed., Kansas City  
Giesekeing, W. H.,  
Indianapolis, Ind.  
Girard, H., Kansas City  
Gleason, Dudley, Kansas City  
Goldklang, Morris, Kansas  
City  
Gordon, Greb, Kansas City  
Gordon, Herbert, Kansas City  
Gould, Anna, Kansas City  
Griffin, C. L., New York  
Haas, Edwin N., Kansas City  
Harper, H. L., Detroit  
Harrison, D. T., Kansas City  
Hart, L. W., Kansas City  
Hatchett, R. C., Kansas City  
Hazelwood, Bob, Kansas City  
Heard, D. K., Kansas City  
Heinen, Rodney W., Kansas  
City  
Hensler, Allan, Kansas City  
Herman, M. S., Detroit  
Hicks, C. O., Kansas City  
Holder, R. W., Kansas City  
Holle, Mamie H., Los  
Angeles, Calif.  
Holt, John, Kansas City  
Holzapfel, Kansas City  
Hoskins, W. B., St. Louis  
Hovey, C. E., St. Louis  
Hubbard, Dorothy, Kansas  
City  
Hutcherson, F. E., Kansas  
City  
Jamieson, A. E., Kansas City  
Jones, W. H., Kansas City  
Jones, O. H., Kansas City  
Kaempf, Walter H., Jr.,

Roth, William, Kansas City,  
Kan.  
Rutledge, Bob, Kansas City  
Scully, Niall, St. Louis  
Simons, James D., Leon, Ia.  
Sommerness, M. D., Topeka,  
Kan.  
Stubbs, Trawick H., Columbia  
Taylor, Samuel, Kansas City  
Terrell, Charles J., Kansas  
City  
Thomas, Miles E., Kansas  
City  
Thompson, L. S., Kansas City  
Tillman, L. M., Kansas City  
Wall, David R., Wichita, Kan.  
Web, Alsop, Kansas City  
Williams, Maysil, Kansas City  
Woods, S. D. E., Osawatomie,  
Kan.  
Wulff, Edwin, Atchison, Kan.

Williams, Wilson, Kansas City  
Wood, H. L., Kansas City  
Woods, Ralph, Kansas City  
Wyly, William J., Evansville,  
Ind.

Yevak, Ed., Kansas City  
Zeller, Fred, New York  
Total—857

## BOOK REVIEWS

### PRINCIPLES GOVERNING EYE OPERATING ROOM PROCEDURES.

By Emma I. Clevenger, R.N., Supervisor, Eye Operating Room, New York Eye and Ear Infirmary, New York City. Illustrated. C. V. Mosby Company, St. Louis. 1948. Price \$5.50.

There has long been need of a concise and well illustrated guide for the operative supervisor of a general hospital that does some, but not a large volume of ophthalmological surgery, so that she may familiarize herself and her staff not only with the different eye instruments but also how they should be set up for the various eye operations. "Principles Governing Eye Operating Room Procedures" is such a reference.

Emma I. Clevenger, R.N., has not only given the nurses and eye surgeon a handy reference, but also a book filled with clear half tone photographs of many instruments.

The book is divided into three major parts which in turn are subdivided into chapters. Part I deals briefly with what the author feels are the essential qualities that an ophthalmic nurse and intern must have, a concise and clear glossary of common eye terms, a roster of the commonly used eye instruments with clear large illustrations. Advice on the care and handling of instruments and equipment and the names and uses of most drugs used by the ophthalmic surgeon. There is an outline of the duties of eye nurses and doctors and how the operating room of the New York Eye and Ear Infirmary is set up.

Part II deals with the various supply tables, all well illustrated, and each instrument is enumerated. Part III lists the individual operations according to the anatomic part of the eye as well as to the technical surgical name of the procedure. The needed instruments are listed for each procedure as well as the individual trays for the various staff men at the infirmary. Many of these descriptions are accompanied by clear and well marked photographs of the trays as laid out.

The book is well printed on glossy paper and is of a size easily carried to the operating room by the nurse. It is written in outline form and there are no wordy descriptions. This volume should be a must for every hospital in which eye surgery is done. A. J. B.

### STANDARDS FOR THE DIAGNOSIS AND TREATMENT OF CANCER.

By the Cancer Committee of the Iowa State Medical Society. 1948.

The Iowa Cancer Manual was first published in 1937 and distributed to the physicians of Iowa as well as to many in adjoining states. The advancement of knowledge and the means of distributing this information to the public has necessitated a new edition.

The Manual is a concise and clear description of cancer in different parts of the body. There are thirty-two chapters. Each chapter gives a lucid description of the etiology, signs and symptoms. The progress of this disease, subsequent metastasis, the differential diagnosis and laboratory methods are discussed as well as the treatment.

In the final chapter there is a well balanced bibliography on each subject.

The purpose of this volume is to keep the general practitioner well informed and on the alert to suspect and to detect cancer at the earliest moment. In the early part of the present century there was an old adage for the medical student, "When in doubt think of syphilis." Why not have a similar motto, "When in doubt

think of cancer," since cancer is the leading cause of death at the present time. This volume would seem to carry out this idea.

The Cancer Committee of the State of Iowa is to be congratulated on its work in keeping its doctors so well informed on this subject and also in establishing diagnostic clinics throughout the State. W. L.

**HERNIA, Anatomy, Etiology, Symptoms, Diagnosis, Differential Diagnosis, Prognosis and Treatment.** By Leigh F. Watson, M.D. Certified by the International Board of Surgery. Third Edition. Enlarged and Thoroughly Revised. With Three Hundred Twenty-Three Illustrations by Helen Lorraine, Willard C. Shepard, Ralph Sweet, C. V. Mosby Company. St. Louis. 1948. Price \$13.50.

This edition incorporates many changes which brings up-to-date the subject of hernia. New chapters and additional illustrations make this edition a more complete volume. There is an increase of 142 pages over the preceding edition.

The operative treatment of hernia is stressed. There have been many types of operations described for the treatment of hernia, and inguinal hernia in particular. The author has given a rather extensive list of the proponents of certain types of procedures, and their date of precedence. The operative treatment advocated by the author for indirect and direct inguinal hernia is the Cooper's ligament repair. Utilizing this method of inguinal reconstruction a lower recurrence rate can be expected because the operation is based on anatomic and physiologic facts. This procedure takes precedence over the Bassini operation which employed the inguinal ligament in repair. The use of cutis grafts is mentioned, plus the many variations in hernioplastics. Nonabsorbable sutures are recommended and the Babcock repair, using wire sutures, is described.

Special anatomic varieties of hernia are dealt with more fully, and several additional types are treated in separate chapters; e.g., epigastric hernia, interstitial hernia and recurrent hernia. Several chapters are devoted to the injection treatment of various herniae.

A new edition is apropos at this juncture to consolidate recent advances, with a view toward the widespread dissemination of the more acceptable modes of therapy. R. L.

**OPERATING ROOM TECHNIQUE.** By Edythe Louise Alexander, R.N., Supervisor of the Operating Rooms of the Roosevelt Hospital, New York City. With 668 Illustrations. Second Edition. C. V. Mosby Company. St. Louis. 1949. Price \$10.00.

The purpose of this book is to present both the fundamental principles and the methods of operating room technic for student and graduate nurses and to present for supervisors a series of lectures and questions on operating room technic, suggestions for the administration of operating rooms and a method of grading student nurses' work.

The text and references comprise 753 pages, divided into twenty-eight chapters. The first thirteen chapters of the book include arrangement of operating rooms, care and cleaning of rooms, nursing personnel, asepsis, sterilization, preparation of operative areas, suture materials, anesthesia, standardization of duties, precautions, surgical positions, draping of operative field, instruments and needles. The remaining fifteen chapters deal with the duties of the operating room nurses in operations involving the various organs and systems of the body and operations in the various surgical specialties. The material is well presented and well illustrated with 668 illustrations.

This book can be recommended as profitable reading to student nurses, graduate nurses, medical students and surgical internes. S. V.

**MEDICAL WRITING, The Technic and the Art.** By Morris Fishbein, M.D., Editor, The Journal of the American Medical Association, with the assistance of Jewel F. Whelan, Assistant to the Editor. Second Edition. The Blakiston Company. Philadelphia - Toronto. 1948. Price \$4.00.

This book on medical writing represents the gradual evolution of theory and practice associated with the conduct of the editorial department of the American Medical Association for some thirty-five years. Increasing organization in the field of medicine has made physicians realize the importance of the preparation of a manuscript for the publication to which it is to be sent; that is, as stated in the publication, the *Journal of the American Medical Association* endeavors to limit practically all scientific contributions to six pages or not more than six thousand words (preferably to articles that are much shorter).

The contents of this book include an explanation of acceptable papers, the various styles, examples of poor grammar in articles received by *The Journal*, and illustrations of how these same articles can be corrected. It definitely ridicules the use of "slang" in articles for medical writing, stating that medicine is a dignified science. Good use of grammar is discussed in many different ways.

There is a discussion of "Summary and Conclusions" and what article should be summarized and how they should be written.

There is an excellent chapter on the construction of a manuscript, title and subtitle and subheading. It is interesting to read some of the original incorrect titles and see how well they appear after correction.

There is also an entire chapter devoted to words and phrases including solecisms, medical jargon, vague and inaccurate terms, preferred usage and official nomenclature. The importance of grammar and spelling are illustrated. The proper usage of prescriptions and the correct way and approach are demonstrated. The American Medical Association Press has adopted certain rules regarding prescriptions and this is discussed fully. The actual preparation of a manuscript, its science and symbols are in this book with illustrations and how they are to be presented to the public for clarity of the article.

This book should be currently of great value to any physician who writes articles for publication. It is a "must." P. M.

**CLINICAL CASE-TAKING, Guides for the Study of Patients, History-Taking and Physical Examination or Semiology of Disease in the Various Systems.** By George R. Herrmann, M.D., Professor of Medicine, University of Texas. Fourth Edition. C. V. Mosby Company. St. Louis. 1949. Price \$3.50.

In the introduction is stated "The ultimate aim of all case taking is to find out what is causing the patient's symptoms in order that the proper steps may be taken to bring about relief."

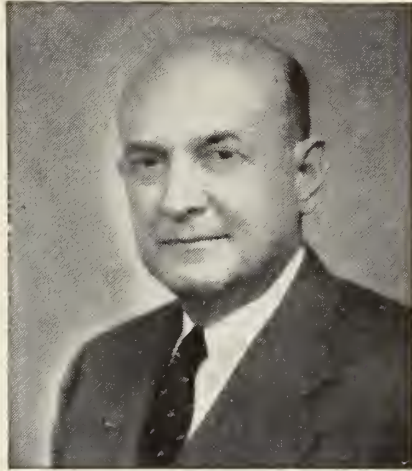
This edition, like the earlier ones, is designed as an extensive outline for assembling the necessary information concerning the patient from the case history, physical examination and laboratory procedures. The same general outline is followed as in the previous edition with the addition of separate sections on pediatric and surgical cases.

The appendix, dealing with details of common symptoms, has been considerably enlarged. The introduction, although designed primarily as a guide to the medical student in his first contacts with patients, could be read with profit as a short refresher course by the physician whose medical school days are well behind him. M. E. H.



FROM SECRETARY OF DEFENSE LOUIS JOHNSON—

# AN URGENT APPEAL TO YOUNG DOCTORS!



*Your personal help is needed to avert a serious threat to our national security!*

By the end of July of this year we will have lost almost one-third of the physicians and dentists now serving with our Armed Forces. Without an increased inflow of such personnel, the shortage will assume even more dangerous proportions by December of this year.

These losses are due to normal expiration of terms of service. The professional men who are leaving the Armed Forces during this critical period are doing so because they have fulfilled their duty-obligations and have earned the right to return to civilian practice.

Without sufficient replacements for these losses, we cannot continue to provide adequate medical and dental care for the almost 1,700,000 service men and women who are the backbone of our nation's defense.

## ***Normal procurement channels will not provide sufficient replacements!***

To alleviate this critical, impending shortage of professional manpower in the three services, I am urging all physicians and dentists who were trained under wartime A. S. T. P. and V-12 programs under government auspices or who were deferred in order to complete their training at personal expense, and who saw no active service, to volunteer for a two-year tour of active duty, at once!

We have written personally to more than 10,000 of you in the past weeks urging such action. The response to this appeal has not been encouraging, and our Armed Forces move rapidly toward a professional manpower crisis!

Many responses have been negative, but worse—a great number of doctors have not replied. It is urgent that we hear from you immediately!

*We feel certain that you recognize an obligation to your fellow men as well as to your profession in this matter. We are confident that you will fulfill that obligation in the spirit of public service that is a tradition with the physician and dentist.*

There is much to be said for a tour of duty with any of the Armed Forces. You will work and train with leading men of your professions. You will have access to abundant clinical material; have the best medical and dental facilities in which to practice. You will expand your whole concept of life through travel and practice in foreign lands. In many ways, a tour of service will be invaluable to you in later professional life!

*Volunteer now for active duty. You are urged to contact the Office of Secretary of Defense by collect wire immediately, signifying your acceptance and date of availability. Your services are badly needed. Will you offer them?*

*Louis Johnson*

*Over 37 Years ...  
Builders and Fitters of  
Artificial Limbs and  
Orthopaedic Appliances*

Isle Built Appliances restore the highest possible degree of efficiency to patients who have suffered amputation or other physical impairment.  
Your instructions followed implicitly.  
Qualified, courteous personnel.

ENTIRE SECOND FLOOR    PHONE VICTOR 2350

**THE W. E. ISLE COMPANY**  
1121 GRAND AVE. KANSAS CITY, MO.

## Mullen Ambulance Company

PRIVATE AMBULANCE  
SERVICE

Local and Distant Trips  
Day or Night

5159 Delmar, ST. LOUIS      Forest 1913



## The Mary E. Pogue School

Complete facilities for training Retarded and Epileptic children educationally and socially. Pupils per teacher strictly limited. Excellent educational, physical and occupational therapy programs.

Recreational facilities include riding, group games, selected movies under competent supervision of skilled personnel.

Catalogue on request.

G. H. Marquardt, M.D.    Barclay J. Macgregor  
Medical Director           Registrar

27 Geneva Road, Wheaton, Illinois  
(Near Chicago)



## THE WALLACE SANITARIUM

MEMPHIS, TENNESSEE

*For the Diagnosis and Treatment of  
Nervous and Mental Diseases, Drug Addiction and Alcoholism*





even after **40**, a woman's work is never done...

Dishes, dustpans, a thousand details...the three "d's" of household drudgery...are challenge enough at any age, but a stack of dinner dishes can look mountain high to the woman in the menopause. This is a disquieting aspect of the daily life of such patients that physicians can bring into proper perspective with "Premarin."

"Premarin" therapy, it has been found, has in it a certain "plus" that produces a sense of well-being in most women. "Premarin" quickly relieves the symptoms of the menopause. It is orally active, and is rapidly absorbed from the intestine.



While sodium estrone sulfate is the principal estrogen in "Premarin," other equine estrogens...estrodial, equilin, equilinenin, hippulin...are probably also present in varying amounts as water soluble conjugates.

**"PREMARIN"**



ESTROGENIC SUBSTANCES (WATER SOLUBLE)  
also known as CONJUGATED ESTROGENS (equine)

**Ayerst, McKenna & Harrison Limited** 22 East 40th Street, New York 16, New York



## MIRACLE DRUGS CANNOT CURE THIS SICKNESS

**We only wish** there *were* a miraculous drug to stop a man from worrying.

Hundreds of thousands would buy it, because constant worry over money literally makes sufferers *sick!*

It's a sickness, however, that miracle drugs cannot cure.

Yet . . . something 'way short of a miracle can!

That's saving! Saving money . . . the surest, wisest way. With U. S. Savings Bonds.

**All you do**—if you're on payroll—is join your company's Payroll Savings Plan.

Or, if you're in business or a profession, enroll in the Bond-A-Month Plan at your local bank.

You'll be pleased to see those savings grow. Ten years from now, when your Bonds reach maturity, you'll get back \$40 for every \$30 you invested!

Is it peace of mind you want?

*Start buying Bonds today!*

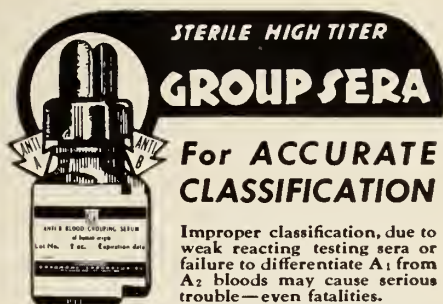
### AUTOMATIC SAVING IS SURE SAVING — U.S. SAVINGS BONDS



*Contributed by this magazine in co-operation with the Magazine Publishers of America as a public service.*

Ad No. 422-C





STERILE HIGH TITER

## GROUP SERA

**For ACCURATE CLASSIFICATION**

Improper classification, due to weak reacting testing sera or failure to differentiate A<sub>1</sub> from A<sub>2</sub> bloods may cause serious trouble—even fatalities.

Our Grouping Sera are certified for HIGH TITER. Exclusively prepared under the personal supervision of Dr. R. B. H. Gradwohl for safe, efficient, accurate laboratory technique. We invite your inquiries.

Our sera are manufactured under Government License No. 160, N.I.H. These sera are Anti-A, Anti-B, and Absorbed Anti-A. Absorbed Anti-A serum is to differentiate between A<sub>1</sub> and A<sub>2</sub> bloods. Anti-M and Anti-N sera are used for blood spots and paternity work. Our Anti-Rh serum is manufactured by the Blood Bank of Dade County and must be used with a viewing box.

Write for a sample copy of The Gradwohl Laboratory Digest full of helpful hints on improved laboratory technique.



# GRADWOHL

LABORATORIES

R. B. H. Gradwohl, M. D., Director  
3314 Lucas Av. St. Louis, Mo.



## PRECISION BUILT *by* Expert Craftsmen

The knee-joint cross-section shows that Hanger Artificial Limbs are not complicated mechanisms, not loosely-fitted pieces, but a few expertly-machined parts carefully assembled by experts. The simple construction making possible the efficient operation of Hanger Limbs is the result of long study and research. It is dependent on precision-made parts properly assembled. Hanger craftsmen are carefully selected and trained for this important work. Each Hanger Limb therefore conforms to specifications developed by years of experience.

## HANGER ARTIFICIAL LIMBS

1912-14 Olive Street  
St. Louis 3, Missouri



## North Shore Health Resort

Winnetka, Illinois

*on the Shores of  
Lake Michigan*

A completely equipped sanitarium for the care of  
*nervous and mental disorders, alcoholism and drug addiction*  
offering all forms of treatment, including electric shock.

**SAMUEL LIEBMAN, M.S., M.D.**

*Medical Director*

225 Sheridan Road

Phone Winnetka 211

## COMMERCIAL ANNOUNCEMENTS

**WANTED:** M. D. trained in Obstetrics and Pediatrics to join new clinic now being organized—central Iowa town of 7,500—new air conditioned ground floor offices. Address Box 163, Missouri State Medical Association, 623 Missouri Bldg., St. Louis 3, Mo.

**FOR SALE:** Nine room clinic with or without equipment. Located in one of the fastest growing cities of 20,000 population. A very good opening for internal medicine. A good man can gross twenty to thirty-five thousand per year. Don't apply unless you mean business. Write P. O. Box 357, Blytheville, Arkansas.

**WANTED:** Resident physicians for Robert Koch Hospital, tuberculosis institution for the City of St. Louis. Residency is accredited for one year with the American Board of Internal Medicine. Contact G. D. Kettelkamp, M.D., Superintendent, Koch, Missouri, telephone Lockhart 8811.

**FOR SALE:** General hospital, forty beds, completely furnished with all modern equipment, also laundry and nurses home, located in a Missouri city of 10,000. For further details write Box 166, Missouri State Medical Association, 623 Missouri Bldg., St. Louis 3, Mo.

**Hair Permanently Removed by Electrolysis**

**DOROTHY WORRELL, R.N.**

**233 Vandeventer, St. Louis**

**Telephone, Jefferson 9436**

*Work Done on Prescription of Physicians Only*

**The Nenrological Hospital,  
2625 The Paseo, Kansas City,  
Missouri. Operated by the Rob-  
inson Clinic, for the care and  
treatment of nervous and men-  
tal patients and associated  
conditions.**

## FAITH HOSPITAL

**A. J. SIGNORELLI, M.D.,**  
*Medical Director*

**GOodfellow 6262**

**2800 N. Taylor, St. Louis, Mo.**

## THE STOKES SANITARIUM 923 Cherokee Road, Louisville, Kentucky

Our **ALCOHOLIC** treatment destroys the craving, restores the appetite and sleep, and rebuilds the physical and nervous condition of the patient. Liquors withdrawn gradually; no limit on the amount necessary to prevent or relieve delirium.

**MENTAL** patients have every comfort that their home affords.

The **DRUG** treatment is one of gradual Reduction. It relieves the constipation, restores the appetite and sleep; withdrawal pains are absent. No Hyoscine or rapid withdrawal methods used.

**NERVOUS** patients are accepted by us for observation and diagnosis as well as treatment.

**E. W. STOKES, Medical Director. Established 1904**  
Telephone—Highland 2101

## INDEX TO ADVERTISERS

Abbott Laboratories .....	475
Aloe, A. S., Company .....	474
American Meat Institute .....	502
Ayerst, McKenna & Harrison, Ltd. ....	551
Camel Cigarettes .....	469
Camp, S. H., & Company .....	464
Central Pharmacal Co. ....	529
Coca-Cola Company .....	509
Cook County Graduate School of Medicine.....	537
Cosmo-Cautery Company .....	545
Denver Chemical Mfg. Co., Inc. ....	537
Duncan Laboratories .....	472
Faith Hospital .....	554
Fleet, C. B., Co., Inc. ....	541
Glenwood Sanatorium .....	537
Gradwohl Laboratories .....	553
Hamilton-Schmidt .....	476
Hanger, J. E., Inc. ....	553
Holland-Rantos Co. ....	473
Isle, W. E., Company .....	550
Lederle Labs. ....	519
Lilly, Eli, & Co. ....	Insert
Luzier's, Inc. ....	470
M & R Dietetic Laboratories, Inc. ....	523
Major Clinic .....	465
Mead Johnson & Co. ....	556
Medical National Defense .....	549
Medical Protective Co. ....	476
Merck & Co., Inc. ....	505
Milwaukee Sanitarium .....	509
Mullen Ambulance .....	550
National Pathological Labs .....	474
Norbury Sanatorium .....	545
North Shore Health Resort .....	553
Parke, Davis & Co. ....	462, 463
Physicians Casualty Assn. ....	474
Pogue, Mary E., School .....	550
Producers Creamery Co. ....	533
Quincy X-Ray & Radium Labs. ....	476
Ralph Sanitarium .....	555
Robinson Clinic, Inc. ....	554
Schering Corporation .....	515
Searle, G. D., & Co. ....	501
Stokes Sanitarium .....	554
U. S. Brewers Foundation, Inc. ....	533
U. S. Savings Bond .....	552
Wallace Sanitarium .....	550
Winthrop-Stearns, Inc. ....	467
Worrell, Dorothy .....	554
Wyeth, Inc. ....	471
Zemmer Company .....	476



# 50 and 2

## YEARS TREATING ALCOHOL AND DRUG ADDICTION

In 1897 Doctor B. B. Ralph developed methods of treating alcohol and narcotic addiction that, by the standards of the time, were conspicuous for success.

Twenty-five years ago experience had bettered the methods. Today with the advantages of collateral medicine, treatment is markedly further improved.

The Ralph Sanitarium provides personalized care in a quiet, homelike atmosphere. Dietetics, hydrotherapy and massage speed physical and emotional re-education. Co-operation with referring physicians. Write or phone.

*The*  
**RALPH**  
**SANITARIUM**

*Established 1897*

Ralph Emerson Duncan, M.D.  
DIRECTOR



**529 HIGHLAND AVENUE • KANSAS CITY 6, MISSOURI**

Telephone Victor 3624

*Remember* in 1932 we brought out Pablum?\*

Embodying a new concept of cereal nutrition, easy of preparation, nonwasteful, forerunner of present day widely practised principles of food fortification—remember?



Later, in response to requests from physicians, we went a step further in Pabena,\* similar in nutritional and convenient features to its father-product, Pablum, different in flavor because of its oatmeal base. If our pioneer work and ethical policy meet with your approbation, remember, please, to specify Pablum and Pabena.

\*"Pablum" and "Pabena" are the registered trademarks of Mead Johnson & Company for these vitamin-and-mineral-enriched mixed cereal foods.

*Mead Johnson & Company, Evansville, Indiana, U. S. A.*



# THE JOURNAL

*of the*  
MISSOURI STATE MEDICAL ASSOCIATION

VOLUME 46  
NUMBER 8

AUGUST, 1949

SINGLE COPY, 40 CENTS  
PER YEAR, \$3.00

## ORIGINAL ARTICLES

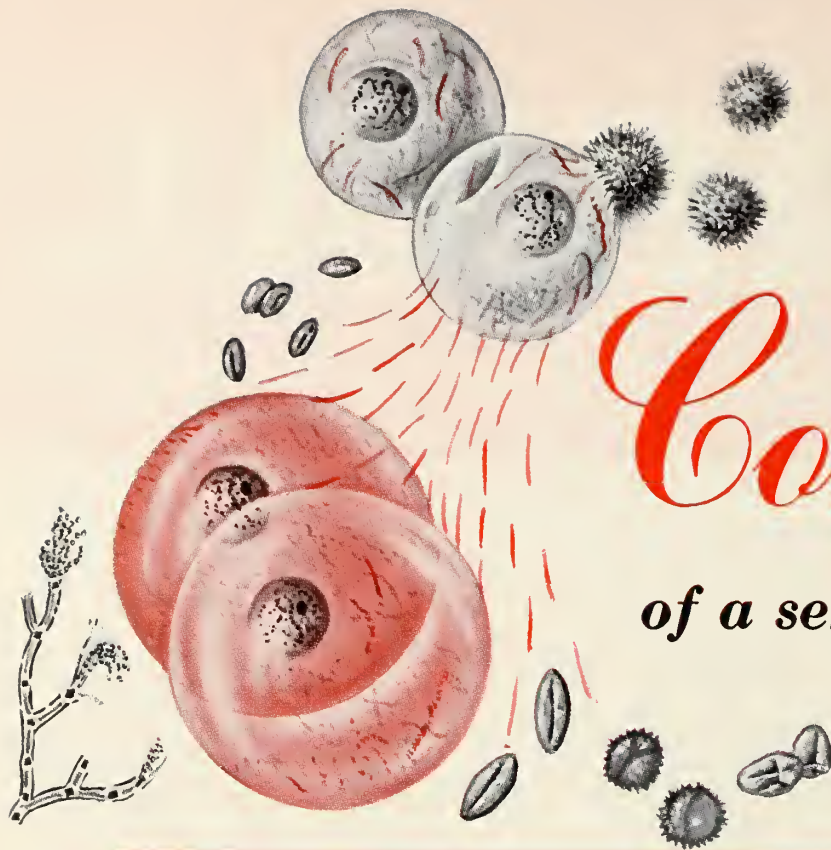
- Some Contributions of Psychiatry to General Medicine  
Selection of an Operation for Lesions of the Colon and Rectum  
Improved Methods in Combatting Tetanus  
Sodium Pregnandiol Glucuronidate Determinations in  
the Diagnosis of Pregnancy



## EDITORIALS

- Centennial of the Association  
Medicine in the News

*(Contents Index Page 561)*



# Contact

*of a sensitized body c*



# Relief

*with BENADRYL*

PARKE, DAVIS & COMPANY



Contact of a sensitized body cell with an allergen and subsequent release of histamine is considered to be the mechanism of allergic disorders.

Blocking the action of histamine, BENADRYL prevents reaction in cells that have been sensitized. Relief of symptoms is gratifyingly rapid, usually occurring within an hour or two after the first dose. And treatment with BENADRYL is simple, convenient, and inexpensive.

# BENADRYL<sup>®</sup>

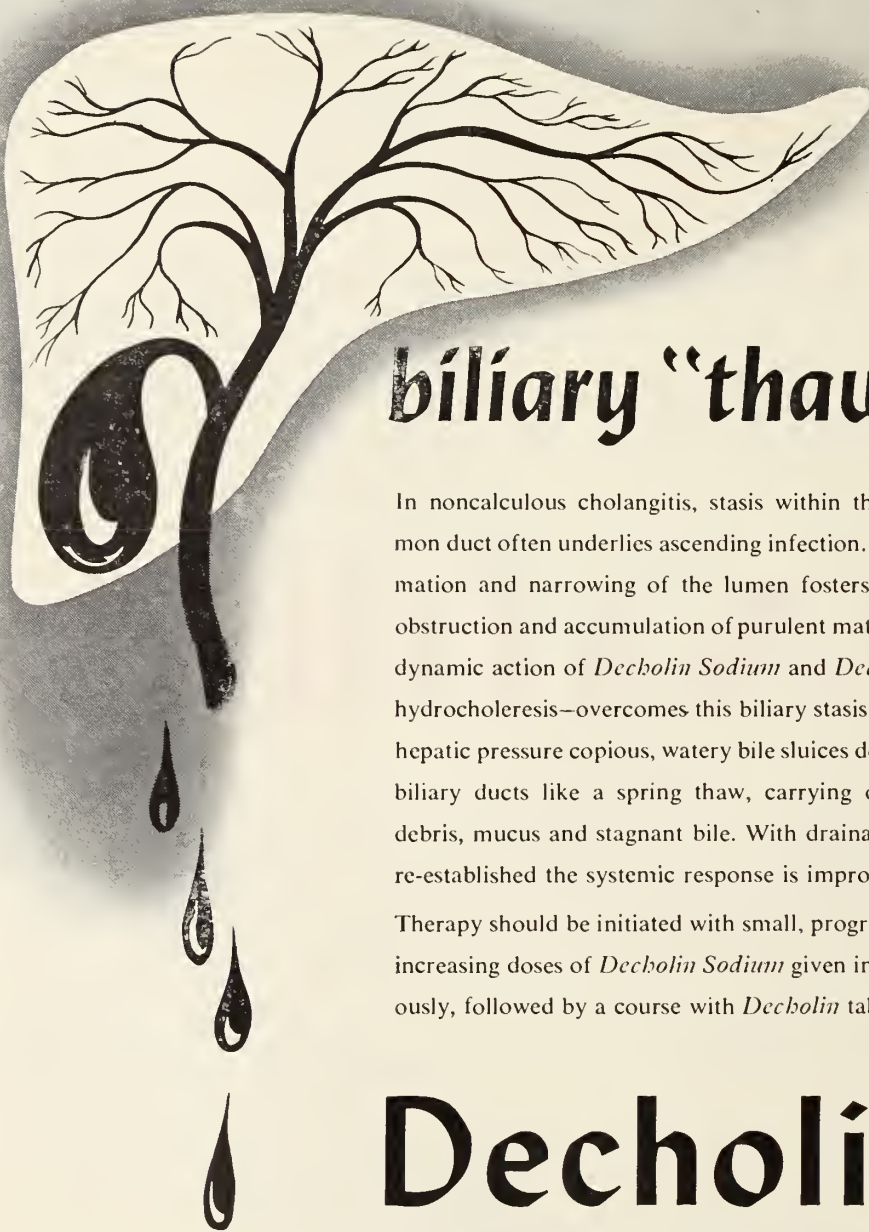
BENADRYL has been found highly effective in a wide variety of allergic states, ranging from seasonal, such as hay fever, to the non-seasonal, such as acute and chronic urticaria, angioneurotic edema, vasomotor rhinitis, contact dermatitis, erythema multiforme, pruritic dermatoses, dermatographism, serum sickness, food allergy, and sensitization to drugs, such as penicillin and the sulfonamides.

BENADRYL hydrochloride (diphenhydramine hydrochloride, Parke-Davis) is available in a variety of forms to facilitate individualized dosage and flexibility of administration, including Kapseals<sup>®</sup>, Capsules and a palatable Elixir.

The usual dosage of BENADRYL is 25 to 50 mg. repeated as required. Children up to 12 years of age may be given 1 to 2 teaspoonsful of Elixir Benadryl.

DETROIT 32, MICHIGAN





## biliary "thaw"

In noncalculous cholangitis, stasis within the common duct often underlies ascending infection. Inflammation and narrowing of the lumen fosters partial obstruction and accumulation of purulent matter. The dynamic action of *Decholin Sodium* and *Decholin*—hydrocholeresis—overcomes this biliary stasis. Under hepatic pressure copious, watery bile sluices down the biliary ducts like a spring thaw, carrying off pus, debris, mucus and stagnant bile. With drainage thus re-established the systemic response is improved.

Therapy should be initiated with small, progressively increasing doses of *Decholin Sodium* given intravenously, followed by a course with *Decholin* tablets.

# Decholin<sup>®</sup>

**brand of dehydrocholic acid**

Tablets of 3¼ gr. in bottles of 25, 100, 500, and 1000.

**Decholin Sodium<sup>®</sup>** (brand of sodium dehydrocholate) in 20% aqueous solution, ampuls of 3 cc., 5 cc., and 10 cc., boxes of 3 and 20.

DECHOLIN and DECHOLIN SODIUM, trademarks reg. U. S. and Canada.



**AMES COMPANY, INC.**  
ELKHART, INDIANA



## CONTENTS

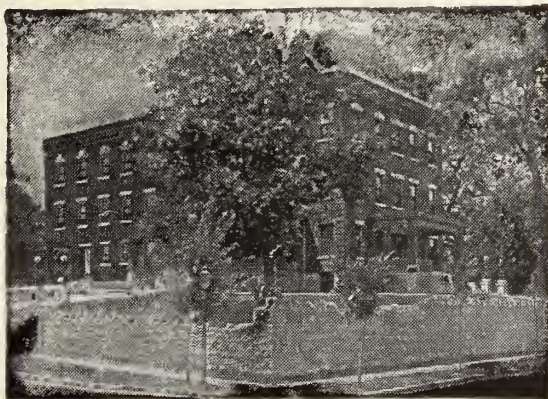
Some Contributions of Psychiatry to General Medicine. Winfred Overholser, M.D., Washington, D.C. 573	Editorials—
	Centennial of the Association..... 597
Selection of an Operation for Lesions of the Colon and Rectum. Howard Mahorner, M.D., and Manson Brown, M.D., New Orleans, La. .... 577	Medicine in the News ..... 597
Improved Methods in Combatting Tetanus. Cyril Costello, M.D., St. Louis..... 582	News Notes ..... 598
Sodium Pregnanediol Glucuronidate Determinations in the Diagnosis of Pregnancy. M. Yanow, M.D., and S. D. Soule, M.D., St. Louis..... 591	Musings of the Field Secretary..... 600
President's Page ..... 596	Deaths ..... 600
	Society Proceedings ..... 603
	Miscellany ..... 603
	Tuberculosis Abstracts ..... 606
	Book Reviews ..... 610

Entered as Second Class Matter, February 18, 1925, at the Post Office at Fulton, Mo., under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1003, Act of October 3, 1917, authorized July 30, 1918. Business Office, 1201-5 Bluff St., Fulton, Mo., and 623 Missouri Building, St. Louis, Mo., Editorial Office, 623 Missouri Building, St. Louis, Mo. Return postage guaranteed. Printed by The Ovid Bell Press, Inc., Fulton, Mo.

# THE MAJOR CLINIC ASSOCIATION

3100 Euclid Avenue, Kansas City, Missouri

A Well  
Equipped  
Institution  
for the  
Treatment of  
Nervous and  
Mental  
Diseases and  
Alcohol  
Drug and  
Tobacco  
Addictions



Beautiful  
Location  
Large, Well  
Shaded  
Grounds,  
Spacious  
Porches,  
All Modern  
Methods for  
Restoring  
Patients to a  
Normal  
Condition

HERMON S. MAJOR, M.D.  
Medical Director

HERMON S. MAJOR, JR.  
Business Manager

**AMERICAN MEDICAL ASSOCIATION**

President, Ernest Edward Irons, Chicago.  
President-Elect, Elmer L. Henderson, Louisville.

Interim Session, Washington, D. C.,  
December 6-9, 1949

**MISSOURI STATE MEDICAL ASSOCIATION****92nd Annual Session, St. Louis, March 26-29, 1950**

President, Wallis Smith, Springfield.  
President-Elect, W. A. Bloom, Fayette.  
Vice Presidents, J. C. Creech, Troy; E. J. McIntire, Carthage;  
H. M. Henrickson, Poplar Bluff.  
Speaker, F. T. H'Doubler, Springfield; Vice Speaker, Victor E. Scherman, St. Louis.  
Treasurer, C. E. Hyndman, St. Louis.  
Secretary, H. E. Petersen, St. Joseph.  
Editor, R. O. Muether, St. Louis.  
Secretary-Editor Emeritus, R. L. Thompson, St. Louis.  
Field Secretary, Raymond McIntyre, St. Louis.  
Assistant Editor-Business Manager, Helen Penn, St. Louis.  
Executive Secretary, Tom R. O'Brien, 623 Missouri Bldg., St. Louis.

**Delegates to the American Medical Association**

R. E. Schlueter, St. Louis, 1949-51; alternate, F. G. Pernoud, St. Louis. James R. McVay, Kansas City, 1949-1951; alternate, R. B. Wray, Nevada. W. L. Allee, Eldon, 1948-50; alternate, Paul Baldwin, Kennett. Howard B. Goodrich, Hannibal, 1948-1950.

**Standing Committees**

**Scientific Work**—A. N. Arneson, St. Louis, Chairman (1951); Victor B. Buhler, Kansas City (1952); H. E. Petersen, St. Joseph.

**Postgraduate Course**—M. Pinson Neal, Columbia, Chairman (1952); Carl R. Ferris, Kansas City (1952); Raymond O. Muether, St. Louis (1951); Edward Massie, St. Louis (1951); Guy D. Callaway, Springfield (1950). **Associate Members**—W. W. Tillman, Bolivar; Kenneth Glover, Mount Vernon; Paul O. Hagemann, St. Louis; D. L. Sexton, St. Louis.

**Publication**—R. O. Muether, St. Louis, Chairman; V. T. Williams, Kansas City; H. E. Petersen, St. Joseph; M. D. Overholser, Columbia; Paul O. Hagemann, St. Louis.

**Public Policy and Public Relations**—Armand D. Fries, St. Louis, Chairman (1952); J. W. Allee, Columbia (1950); F. R. Crouch, Farmington (1951); Howard B. Goodrich, Hannibal (1951); John Growdon, Kansas City (1950). **Associate Member**—Cyril W. Schumacher, St. Louis.

**Defense**—Charles E. Hyndman, St. Louis, Chairman (1951); Roland S. Kieffer, St. Louis (1950); L. F. Heimbürger, Springfield (1950); O. B. Zeinert, St. Louis (1952); L. P. Forgrave (1952).

**Medical Education and Hospitals**—John S. Knight, Kansas City, Chairman (1951); F. T. H'Doubler, Springfield (1950); O. J. Gibson, Cape Girardeau (1952); D. M. Dowell, Chillicothe (1950); Oliver Abel, St. Louis (1952).

**Cancer**—E. C. Ernst, St. Louis, Chairman (1950); E. Kip Robinson, Kansas City (1951); Everett Sugarbaker, Jefferson City (1951); William E. Leighton, St. Louis (1952); Marvin Napper, Springfield (1952).

**Medical Economics**—Carl F. Vohs, St. Louis, Chairman (1950); Morris S. Harless, Kansas City (1951); C. T. Herbert, Cape Girardeau (1951); G. A. Aiken, Marshall (1952); A. P. Rowlette, Moberly (1952).

**Mental Health**—E. F. Hctor, Farmington, Chairman (1951); Paul Hines, St. Louis (1950); Orr Mullinax, Jefferson City (1950); B. Landis Elliott, Kansas City (1952); Frank M. Grogan, St. Louis (1952).

**Maternal Welfare**—E. Lee Dorsett, St. Louis, Chairman (1952); Leo Hartnett, St. Louis (1952); J. L. Johnston, Springfield (1951); E. E. Wadlow, St. Joseph (1950); J. Milton Singleton, Kansas City (1950).

**Infant Care**—G. V. Herrman, Kansas City, Chairman (1951); Eugene Schwartz, Springfield (1951); H. E. Petersen, St. Joseph (1950); Peter G. Danis, St. Louis (1952); Park J. White, St. Louis (1952). **Associate Members**—Joseph C. Jaudon, St. Louis; Daniel B. Landau, Hannibal.

**Health and Public Instruction (McAlester Foundation)**—A. W. McAlester, III, Kansas City, Chairman (1950); M. K. Underwood, Rolla (1951); B. E. DeTar, Joplin (1951); Joseph Conrad, Chillicothe (1950); J. Earl Smith, St. Louis (1952).

**Constitution and By-Laws**—B. Landis Elliott, Kansas City, Chairman (1950); J. H. Summers, Lebanon (1951); John J. Hammond, St. Louis (1950); W. Logan Allee, Eldon (1952); H. O. Loyd, Jefferson City (1952).

Year indicates expiration of term.

**Fractures**—Daniel L. Yancey, Springfield, Chairman (1952); W. J. Stewart, Columbia (1951); N. S. Pickard, Kansas City (1951); W. R. Bohne, St. Louis (1950); J. Albert Key, St. Louis (1950). **Associate Members**—Jacob Kulowski, St. Joseph; B. L. Murphy, Hannibal.

**Conservation of Eyesight**—C. Souter Smith, Springfield, Chairman (1952); Robert Mattis, St. Louis (1951); A. N. LeMoine, Kansas City (1950); C. P. Dyer, St. Louis (1950); Robert S. Minton, St. Joseph (1952). **Associate Members**—Winfred L. Post, Joplin; Philip Luedde, St. Louis; John McLeod, Kansas City; G. J. Tygett, Cape Girardeau; S. L. Freeman, Kirksville; H. B. Stauffer, Jefferson City; E. D. Tenaglia, St. Louis.

**Control of Venereal Disease**—A. W. Neilson, St. Louis, Chairman (1952); W. S. Sewell, Springfield (1951); Charles Greenberg, St. Joseph (1950); Hugh L. Dwyer, Kansas City (1950); E. M. Cannon, St. Louis (1952).

**Industrial Health**—V. T. Williams, Kansas City, Chairman (1951); Horace F. Flanders, Kansas City (1951); E. M. Fessenden, St. Louis (1950); A. M. Ziegler, Kansas City (1952); R. A. Sutter, St. Louis (1952). **Associate Members**—R. Emmet Kelly, St. Louis; H. M. Roebber, Bonne Terre.

**Special Committees**

**Physical Medicine**—F. Garrett Pipkin, Kansas City, Chairman (1951); Emmett Settle, Rock Port (1950); Luke A. Knese, St. Louis (1950); A. J. Kotkis, St. Louis (1952); J. L. Washburn, Versailles (1952).

**Tuberculosis**—E. E. Glenn, Springfield, Chairman; Lawrence E. Wood, Kansas City; J. L. Mudd, St. Louis; Paul Murphy, St. Louis; C. A. Brashear, Mount Vernon; W. P. McDonald, St. Joseph; I. J. Flance, St. Louis; Florence E. MacInnis, Kansas City.

**Study of Cardiac Diseases**—A. Graham Asher, Kansas City, Chairman (1952); Drew Luten, St. Louis (1951); A. M. Estes, Jackson (1951); Julius Jensen, St. Louis (1950); Glenn W. Hendren, Liberty (1952). **Associate Members**—Horace W. Carle, St. Joseph; J. W. Fleming, Moberly; C. B. Davis, Nevada; Arthur Strauss, St. Louis; William I. Park, Springfield.

**Rural Medical Service**—R. W. Kennedy, Marshall, Chairman; A. E. Spelman, Smithville; J. W. Well, Palmyra; Martin M. Hart, Salem; R. B. Wray, Nevada.

**COUNCILOR DISTRICTS AND COUNTIES IN EACH DISTRICT\***

J. W. THOMPSON, St. Louis, Chairman

E. C. BOHRER, West Plains, Vice Chairman

**First District:** Councilor, Donald M. Dowell, Chillicothe. Counties: Andrew, Atchison, Buchanan, Caldwell, Carroll, Clay, Clinton, Daviess, De Kalb, Gentry, Grundy, Harrison, Holt, Livingston, Mercer, Nodaway, Platte, Ray, Worth.

**Second District:** Councilor, W. F. Francka, Hannibal. Counties: Adair, Chariton, Clark, Knox, Lewis, Linn, Macon, Marion, Monroe, Pike, Putnam, Ralls, Randolph, Schuyler, Scotland, Shelby, Sullivan.

**Third District:** Councilor, J. William Thompson, St. Louis: St. Louis City.

**Fourth District:** Councilor, Otto W. Koch, Clayton. Counties: Franklin, Jefferson, Lincoln, St. Charles, St. Louis County, Warren.

**Fifth District:** Councilor, J. F. Jolley, Mexico. Counties: Audrain, Boone, Callaway, Camden, Cole, Cooper, Gasconade, Howard, Maries, Miller, Moniteau, Montgomery, Morgan, Osage.

**Sixth District:** Councilor, R. W. Kennedy, Marshall. Counties: Bates, Benton, Cass, Cedar, Henry, Johnson, Lafayette, Pettis, St. Clair, Saline, Vernon.

**Seventh District:** Councilor, Edgar C. Virden, Kansas City. County: Jackson.

**Eighth District:** Councilor, W. S. Sewell, Springfield. Counties: Barry, Barton, Christian, Dade, Dallas, Greene, Hickory, Jasper, Lawrence, McDonald, Newton, Polk, Stone, Taney, Webster.

**Ninth District:** Councilor, E. Claude Bohrer, West Plains. Counties: Carter, Crawford, Dent, Douglas, Howell, Laclede, Oregon, Ozark, Phelps, Pulaski, Ripley, Shannon, Texas, Wright.

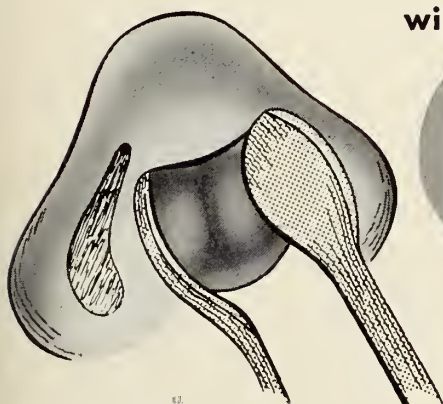
**Tenth District:** Councilor, Frank W. Hall, Cape Girardeau. Counties: Bollinger, Butler, Cape Girardeau, Dunklin, Iron, Madison, Mississippi, New Madrid, Pemiscott, Perry, Reynolds, St. Francois, Ste. Genevieve, Scott, Stoddard, Washington, Wayne.

Counties in italics are not organized.



# in hay fever...

- ...Nasal Engorgement Reduced
- ...Soreness, Congestion Relieved
- ...Aeration Promoted
- ...Drainage Encouraged



with

## NEO-SYNEPHRINE®

**HYDROCHLORIDE**

Brand of  
Phenylephrine Hydrochloride

**W**hen Neo-Synephrine comes in contact with the swollen, irritated mucous membrane of the nose, the patient soon experiences relief.

This powerful vasoconstrictor acts quickly to shrink engorged mucous membranes, restoring easy breathing, and promoting free drainage.

The prolonged effect of Neo-Synephrine makes fewer applications necessary for the relief of nasal congestion — permitting longer periods of comfort and rest.

Neo-Synephrine does not lose its effectiveness on repeated application . . . It may be employed with good results throughout the hay fever season . . . It is notable for relative freedom from sting and absence of compensatory congestion . . . Virtually no systemic side effects are produced.

**Supplied as:**

¼% and 1% in isotonic saline solution  
—1 oz. bottles.

¼% in aromatic isotonic solution of  
three chlorides—1 oz. bottles.

½% water soluble jelly—½ oz. tubes.



**Winthrop-Stearns INC.**  
NEW YORK 13, N. Y. WINDSOR, ONT.

Neo-Synephrine, trademark reg. U. S. & Canada

# County Societies in Affiliation with the Missouri State Medical Association

COUNTY	DISTRICT	PRESIDENT	ADDRESS	SECRETARY	ADDRESS
Andrew .....	1.....	V. R. Wilson.....	Rosendale.....	M. L. Holliday.....	Fillmore
Audrain .....	5.....	Glen P. Kallenbach.....	Mexico.....	Fred Griffin.....	Mexico
Barton-Dade .....	8.....	Rudolf Knapp.....	Golden City.....	Vern T. Bickel.....	Lamar
Bates .....	6.....	C. J. Allen.....	Rich Hill.....	John M. Cooper.....	Butler
Benton .....	6.....	T. S. Reser.....	Cole Camp.....	James A. Logan.....	Warsaw
Boone .....	5.....	James Baker.....	Columbia.....	Helen Yeager.....	Columbia
Buchanan .....	1.....	O. Earl Whitsell.....	St. Joseph.....	Joseph L. Fisher.....	St. Joseph
Butler .....	10.....	Frank E. Dinelli.....	Poplar Bluff.....	J. W. McPheeters, Jr.....	Poplar Bluff
Caldwell-Livingston .....	1.....	Virgil D. Vandiver.....	Chillicothe.....	Charles M. Grace.....	Chillicothe
Callaway .....	5.....	R. B. Price.....	Fulton.....	R. N. Crews.....	Fulton
Camden .....	5.....	E. G. Claiborne.....	Camdenton.....	G. T. Myers.....	Macks Creek
Cape Girardeau .....	10.....	O. J. Gibson.....	Cape Girardeau.....	Charles F. Wilson.....	Cape Girardeau
Carroll .....	1.....	J. Morris Atwood.....	Carrollton.....	John H. Platz.....	Carrollton
Carter-Shannon .....	9.....	Harry Rollins.....	Winona.....	W. T. Eudy.....	Eminence
Cass .....	6.....	Herbert A. Tracy.....	Belton.....	O. B. Barger.....	Harrisonville
Chariton-Macon-Monroe-Randolph .....	2.....	D. E. Eggleston.....	Macon.....	Henry K. Baker.....	Moberly
Clay .....	1.....	W. H. Goodson.....	Liberty.....	S. R. McCracken.....	Excelsior Springs
Clinton .....	1.....	Ronald E. Wilbur.....	Cameron.....	F. A. Santner.....	Lathrop
Cole .....	5.....	H. M. Wiley.....	Jefferson City.....	J. Paul Leslie.....	Jefferson City
Cooper .....	5.....			J. C. Tinscher.....	Boonville
Dallas Hickory-Polk .....	8.....	C. H. Barnett.....	Bolivar.....	John R. O'Brien.....	Bolivar
De Kalb .....	1.....			W. S. Gale.....	Osborn
Dunklin .....	10.....	Quinton Tarver.....	Kennett.....	E. L. Spence.....	Kennett
Franklin .....	4.....	Herbert H. Schmidt.....	Marthasville.....	F. G. Mays.....	Washington
Greene .....	8.....	Daniel L. Yancey.....	Springfield.....	Kenneth E. Knabb.....	Springfield
Grundy-Davless .....	1.....	Joseph M. Quisito.....	Trenton.....	E. A. Duffy.....	Trenton
Harrison .....	1.....	Merriam Gearhart.....	Bethany.....	W. A. Broyles.....	Bethany
Henry .....	6.....	S. B. Hughes.....	Clinton.....	R. S. Hollingsworth.....	Clinton
Holt .....	1.....	F. E. Hogan.....	Mound City.....	D. C. Perry.....	Mound City
Howard .....	5.....	Morris Leech.....	Fayette.....	Francis D. Dean.....	Fayette
Jackson .....	7.....	Carl R. Ferris.....	Kansas City.....	Kenneth E. Cox.....	Kansas City
Jasper .....	8.....	George H. Wood.....	Carthage.....	E. H. Hamilton.....	Joplin
Jefferson .....	4.....	Robert H. Donnell.....	Crystal City.....	George Hopson.....	DeSoto
Johnson .....	6.....	O. H. Damron.....	Warrensburg.....	Reed T. Maxson.....	Warrensburg
Laclede .....	9.....	H. W. Carrington.....	Lebanon.....	B. B. Hurst.....	Lebanon
Lafayette .....	6.....	Douglas Kelling.....	Waverly.....	Jordan Kelling.....	Waverly
Lewis-Clark-Scotland .....	2.....	J. R. Bridges.....	Kahoka.....	P. W. Jennings.....	Canton
Lincoln .....	4.....	H. S. Harris.....	Troy.....	J. C. Creech.....	Troy
Linn .....	2.....	Roy R. Haley.....	Brookfield.....	J. R. Dixon.....	Brookfield
Marion-Ralls .....	2.....	H. L. Greene.....	Hannibal.....	M. J. Roller.....	Hannibal
Mercer .....	1.....	T. S. Duff.....	Cainsville.....	J. M. Perry.....	Princeton
Miller .....	5.....			Carl T. Buehler, Jr.....	Eldon
Mississippi .....	10.....	G. W. Whitaker.....	East Prairie.....	E. C. Rolwing.....	Charleston
Moniteau .....	5.....	K. S. Latham.....	California.....	L. L. Latham.....	California
Montgomery .....	5.....	E. J. T. Anderson.....	Montgomery City.....	S. J. Byland.....	Wellsville
Morgan .....	5.....	A. J. Gunn.....	Versailles.....	J. L. Washburn.....	Versailles
New Madrid .....	10.....	L. J. Smith.....	New Madrid.....	H. W. Carter.....	Portageville
Newton .....	8.....	H. C. Lentz.....	Neosho.....	J. A. Guthrie.....	Neosho
Nodaway-Atchison-Gentry-Worth .....	1.....	Frank H. Rose.....	Albany.....	Charles D. Humbert.....	Barnard
North Central Counties Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam) .....	2.....	Spencer L. Freeman.....	Kirksville.....	John B. Jones.....	Kirksville
Ozarks Medical Society (Barry-Lawrence-Stone-Christian-Taney) .....	8.....	Fred Wommack.....	Crane.....	Kenneth Glover.....	Mt. Vernon
Pemiscot .....	10.....	E. L. Taylor.....	Steele.....	C. F. Cain.....	Caruthersville
Perry .....	10.....	J. J. Bredall.....	Perryville.....	L. W. Feltz.....	Perryville
Pettis .....	6.....	E. L. Rhodes.....	Sedalia.....	Carl D. Siegel.....	Sedalia
Phelps-Crawford-Dent-Pulaski .....	9.....	A. A. Drake.....	Rolla.....	M. K. Underwood.....	Rolla
Pike .....	2.....	Eugene Barrymore.....	Bowling Green.....	Charles H. Lewellen.....	Louisiana
Platte .....	1.....	L. C. Calvert.....	Weston.....	H. Graham Parker.....	Platte City
Ray .....	1.....	L. D. Greene.....	Richmond.....		
St. Charles .....	4.....	J. M. Jenkins.....	St. Charles.....	Calvin Clay.....	St. Charles
St. Francois-Iron-Madison-Washington-Reynolds .....	10.....	George L. Watkins.....	Farmington.....	Marvin T. Haw, Jr.....	Bonne Terre
Ste. Genevieve .....	10.....	A. E. Sexauer.....	Ste. Genevieve.....	R. W. Lanning.....	Ste. Genevieve
St. Louis City .....	3.....	J. W. Thompson.....	St. Louis.....	S. J. Merenda.....	St. Louis
St. Louis .....	4.....	Paul R. Whitener.....	St. Louis.....	Robert C. Kingsland.....	St. Louis
Saline .....	6.....	James A. Reid.....	Marshall.....	Charles A. Veatch.....	Marshall
Scott .....	10.....	W. C. Critchlow.....	Sikeston.....	W. J. Ferguson.....	Sikeston
Shelby .....	2.....	D. L. Harlan.....	Clarence.....		
South Central Counties Medical Societies (Howell-Oregon-Texas-Wright-Douglas) .....	9.....	Garrett S. Hogg, Jr.....	Cabool.....	A. C. Ames.....	Mountain Grove
Stoddard .....	10.....	H. A. Harris.....	Bloomfield.....	W. C. Dieckman.....	Dexter
Vernon-Cedar .....	6.....	William H. Allen.....	Nevada.....	Rolla B. Wray.....	Nevada
Webster .....	8.....	C. R. Macdonnell.....	Marshfield.....	E. G. Beers.....	Seymour





## WHEN THE DIET

# *Needs Supplementation*

Comparison of the accompanying two columns of nutritional values clearly shows why Ovaltine in milk has been so widely accepted as a highly effective *multiple dietary food supplement*.

Column A lists the National Research Council's Recommended Daily Dietary Allowances for each 100 *calorie portion* in the diet of a 154-pound man of sedentary occupation. Column B lists the amounts

of the same nutrients provided by a 100 *calorie portion* of Ovaltine in milk.

	A	B
	N.R.C. Diet	Ovaltine in Milk*
CALORIES .....	100	100
CALCIUM .....	40 mg.	166 mg.
IRON .....	0.5 mg.	1.8 mg.
PHOSPHORUS .....	60 mg.	139 mg.
VITAMIN A .....	208 I.U.	444 I.U.
THIAMINE .....	0.05 mg.	0.17 mg.
RIBOFLAVIN .....	0.08 mg.	0.30 mg.
NIACIN .....	0.5 mg.	1.0 mg.
ASCORBIC ACID .....	3.1 mg.	4.4 mg.
VITAMIN D .....		62 I.U.
PROTEIN .....	2.9 Gm.	4.7 Gm.

\*Based on average reported values for milk. Three servings of Ovaltine, each made of ½ oz. of Ovaltine and 8 fl. oz. of whole milk, the daily dosage recommended for diet supplementation, provide 676 calories.

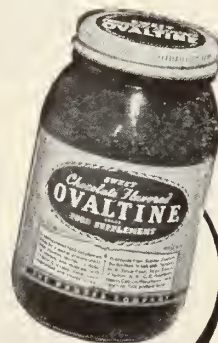
The easy digestibility and appealing flavor of Ovaltine in milk enhance its value as a dietary supplement. Chocolate Flavored Ovaltine is especially liked by children.

THE WANDER COMPANY, 360 N. MICHIGAN AVE., CHICAGO 1, ILL.



# *Ovaltine*

Two kinds, Plain and Chocolate Flavored. Serving for serving, they are virtually identical in nutritional content.





Metrazol, pentamethylentetrazol  
Ampules, 1 cc. and 3 cc.  
Sterile Solution, 30 cc. vials  
Tablets and Powder

# Metrazol

COUNCIL ACCEPTED

A DEPENDABLE, QUICK-ACTING  
CEREBRAL AND MEDULLARY  
STIMULANT

Metrazol is indicated for narcotic depression, for instance, in poisoning with barbiturates or opiates, in acute alcoholism and during the operation and postoperatively when respiration becomes inadequate because of medullary depression due to the anesthetic.

Inject 3 cc. Metrazol intravenously, repeat if necessary, and continue with 1 or 2 cc. intramuscularly as required.

**Bilhuber-Knoll Corp. Orange, N. J.**



## THE WALLACE SANITARIUM

MEMPHIS, TENNESSEE

*For the Diagnosis and Treatment of  
Nervous and Mental Diseases, Drug Addiction and Alcoholism*



the gland,  
the whole  
gland...

... and nothing but the whole gland  
can achieve the effects of the full  
array of cortical hormones in correcting  
such typical symptoms of adrenal cortical  
insufficiency as loss of weight, impaired  
resistance to infections, lowered muscle  
tone, lassitude and mental apathy.

Because ADRENAL CORTEX EXTRACT (UPJOHN) is a specially  
extracted preparation from the whole gland, it  
provides all the active principles of the  
cortex for full therapeutic replacement  
of multiple cortical action on carbohydrate,  
fat and protein metabolism, vascular  
permeability, plasma volume,  
body fluids and electrolytes.

- Sterile Solution
- in 10 cc. rubber-
- capped vials for
- subcutaneous,
- intramuscular, and
- intravenous therapy.

## ADRENAL CORTEX EXTRACT (UPJOHN)

**Upjohn**

FINE PHARMACEUTICALS SINCE 1886

KALAMAZOO 99, MICHIGAN



One of Four Main Buildings

## GLENWOOD SANATORIUM

A Private Hospital for Care of Nervous and Mental Disorders, Alcohol and Narcotic Addictions.

Thoroughly equipped for all the approved therapeutic measures. Insulin, metrazol and electro shock used in selected cases.

Four main buildings for patients permit ample classification facilities. Large grounds composed of about fifty acres make many out-of-door activities possible.

Phone WEBster 1056

*For full information, address*

GLENWOOD SANATORIUM, Webster Groves, St. Louis 19, Mo.

## SPECIFIC DESENSITIZATION is the aim in Ragweed Pollinosis..

The antihistaminic drugs "do not replace the more lasting benefit obtainable by successful specific . . . desensitization."

Feinberg, S. M.: Postgrad. Med. 3: 92 (1948).

"Apparently, desensitization treatment is still the method of choice, and the antihistaminic drugs cannot be considered as substitutes."

Levin, L.; Kelly, J. F., and Schwartz, E.: New York State J. Med. 48: 1474 (1948).

The antihistaminic drugs "are valuable additions to our armamentarium, but do not . . . supplant the specific desensitizing injections."

Brown, G. T.: M. Ann. District of Columbia 16:675 (1947).

Pollen desensitization "still remains the treatment of choice in hay fever."

Rosen, F. L.: J. M. Soc. New Jersey 45: 390 (1948).

### DIAGNOSTIC AND TREATMENT SETS

**State Pollen Diagnostic Sets (\$7.50):** Dry pollen allergens selected according to state; 1 vial house-dust allergen. Material for 30 tests in each vial.

**Stock Treatment Sets (\$7.50):** Each consisting of a series of dilutions of pollen extracts for hypa-sensitization, with accompanying dosage schedule. Single pollens or a choice of 21 different mixtures. Five 3-cc. vials in each set—1:10,000, 1:5,000, 1:1,000, 1:500, and 1:100 concentrations.

### Special Mixture Treatment Sets (\$10.00)

Mixtures of pollen extracts specially prepared according to the patient's individual sensitivities. Ten days' processing time required.

Arlington offers a full line of patent, carefully prepared, and properly preserved allergenic extracts for diagnosis and treatment—pollens, faads, epidermals, fungi, and incidentals.

*Literature to physicians on request.*

*Arlington*

THE ARLINGTON CHEMICAL COMPANY

YONKERS 1, NEW YORK

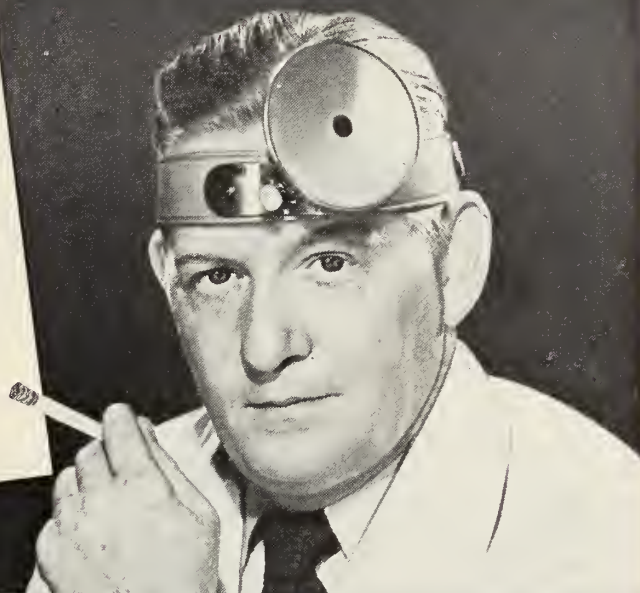


# How mild can a cigarette be?

## DOCTORS REPORT

In a recent test of hundreds of people who smoked only Camels for 30 days, noted throat specialists, making weekly examinations, reported

**"NOT ONE SINGLE CASE OF THROAT IRRITATION DUE TO SMOKING-CAMELS!"**



## SMOKERS REPORT

"I MADE THE CAMEL 30-DAY TEST AND I **KNOW!** CAMELS ARE THE MILDEST CIGARETTE I'VE EVER SMOKED—AND SO GOOD TASTING, TOO!"

*Rita Edwards*  
TELEPHONE OPERATOR



R. J. Reynolds Tobacco Company, Winston-Salem, N. C.

*According to a Nationwide survey:*

# More Doctors Smoke Camels

*than any other cigarette*



Doctors smoke for pleasure, too! And when three leading independent research organizations asked 113,597 doctors what cigarette they smoked, the brand named most was Camel!

# 50 and 2

## YEARS TREATING ALCOHOL AND DRUG ADDICTION

In 1897 Doctor B. B. Ralph developed methods of treating alcohol and narcotic addiction that, by the standards of the time, were conspicuous for success.

Twenty-five years ago experience had bettered the methods. Today with the advantages of collateral medicine, treatment is markedly further improved.

The Ralph Sanitarium provides personalized care in a quiet, homelike atmosphere. Dietetics, hydrotherapy and massage speed physical and emotional re-education. Co-operation with referring physicians. Write or phone.

*The*  
**RALPH**  
**SANITARIUM**  
*Established 1897*

Ralph Emerson Duncan, M.D.  
DIRECTOR



**529 HIGHLAND AVENUE • KANSAS CITY 6, MISSOURI**

*Telephone Victor 3624*





## when reducers stray from the dietary path . . .

**TABLETS,**  
2.5 mg. and 5 mg.

**ELIXIR,**  
20 mg. per fluidounce  
(2.5 mg. per fluidrachm)

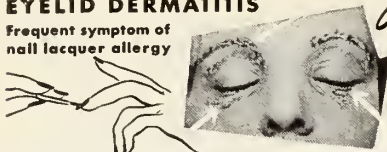
**AMPOULES,**  
20 mg. per cc.

Prescribe

**desoxyn**<sup>®</sup> HYDROCHLORIDE

(Methamphetamine Hydrochloride, Abbott)

. . . DESOXYN Hydrochloride provides a safe, simple and effective curb on the wayward appetite. At the same time, the stimulating action of DESOXYN increases the patient's sense of well-being and desire for activity. To depress the appetite, one 2.5-mg. tablet an hour before breakfast and lunch is usually sufficient. A third tablet may be taken in midafternoon, if needed, and if it does not cause insomnia. • It has been shown that weight for weight DESOXYN is more potent than other sympathomimetic amines so that *smaller doses* may be used effectively. In addition, DESOXYN has a *faster action, longer effect and relatively few side-effects*. • Orally, DESOXYN is an effective cerebral stimulant with a wide variety of uses. Parenterally, it helps to restore and maintain blood pressure during operative procedure. For more detailed information, write to ABBOTT LABORATORIES, NORTH CHICAGO, ILLINOIS

**EYELID DERMATITIS**Frequent symptom of  
nail lacquer allergy*New* **AR-EX HYPO-ALLERGENIC NAIL POLISH**In clinical tests proved **SAFE** for 98%  
of women who could wear no other  
polish used.At last, a nail polish for your allergic patients.  
In 7 lustrous shades. Send for clinical resume.

EXCLUSIVELY BY

AR-EX

*Cosmetics***AR-EX COSMETICS, INC. 1036 W. VAN BUREN ST., CHICAGO 7, ILL.****RADIUM** (including Radium Applicators) **FOR ALL MEDICAL PURPOSES**  
*Est. 1919***QUINCY X-RAY & RADIUM LABORATORIES**

(owned and directed by a Physician-Radiologist)

W. C. U. Bldg.

**HAROLD SWANBERG, B.S., M.D., Director****QUINCY, ILLINOIS****HAMILTON-SCHMIDT SURGICAL COMPANY***St. Louis, Missouri*

[[ Surgical Instruments, Invalid and Sick Room Supplies ]]  
 [[ Post-Operative Belts, Elastic Hosiery and Trusses Fitted ]]

**Central 1680****REGISTERED NURSE IN ATTENDANCE 215 North Tenth Street***for Fifty Years***PROFESSIONAL PROTECTION  
EXCLUSIVELY**

**THE**  
**MEDICAL PROTECTIVE COMPANY**  
**FORT WAYNE, INDIANA**

ST. LOUIS Office: A. W. Breckenkamp, Representative, 623 Missouri Theatre Building, Telephone Newstead 0404



# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies  
Issued Monthly under direction of the Publication Committee

COPYRIGHTED, 1949, BY MISSOURI STATE MEDICAL ASSOCIATION. ALL RIGHTS RESERVED.

VOLUME 46

AUGUST, 1949

NUMBER 8

R. O. MUETHER, M.D., Editor  
HELEN PENN, Assistant Editor  
623 Missouri Bldg., St. Louis, Mo. Telephone, Newstead 0404-05

PUBLICATION COMMITTEE { R. O. MUETHER, M.D., Chairman  
V. T. WILLIAMS, M.D.  
H. E. PETERSEN, M.D.  
PAUL O. HAGEMANN, M.D.  
M. D. OVERHOLSER, M.D.

### SOME CONTRIBUTIONS OF PSYCHIATRY TO GENERAL MEDICINE

WINFRED OVERHOLSER, M.D., *Washington, D. C.*

Superintendent, Saint Elizabeths Hospital, Professor of Psychiatry, George  
Washington University School of Medicine, Washington, D. C.

THAT PSYCHIATRIC CONSIDERATIONS play an important role in the general practice of medicine is a proposition which is not likely to be disputed seriously. There is, indeed, a growing recognition of the importance of the study of the patient as a whole of the emotional factors in disease. This development, however, is a recent one. Why should this be true? Certainly there was a time a century and more ago when the physician, within the limits of his knowledge, considered all of the factors which are relevant to the patient's illness—the physical, environmental, social and emotional. It has occurred to me that it might be of interest to a group representing the general medical profession to consider some of the reasons why psychiatry has, during the past, appeared to grow away from general medicine and what can be done to reintegrate it with the rest of the stream of medical practice.

Psychiatry is a relatively new specialty. Interest even in the grosser forms of mental aberration was hardly manifested by any segment of the medical profession before Pinel; that is, the end of the 18th Century. Until his time mental disorder or madness, or lunacy, as it was then called, was hardly considered to fall within the field of medicine at all, but to be rather the province of the clergyman. In this country the first serious attention to psychiatry dates from the appearance of Benjamin Rush's book in 1812.

Both Pinel and Rush were well trained general physicians. In view of their training and of the then prevailing lack of understanding of mental

mechanisms it is not strange that they sought for physical causes of mental disorder and for physical forms of treatment. Rush particularly emphasized blood-letting and the administration of emetics. Pinel emphasized rather the possibilities of what one should now call psychotherapy. Special institutions began to spring up for the care of persons suffering from mental disorder. These were essentially custodial and were indeed generally known as asylums. Some of them were not even under medical control. The first State Hospital, at Williamsburg, Virginia, though founded in 1773, was under the control of a lay "principal keeper" until 1841! In view of the general social disapproval of mental disorders the tendency was to locate these institutions at a distance from centers of population. Furthermore, the emphasis was on the safety of the public; the "asylums" were looked upon as adjuncts to the police activities of the state or else as receptacles for the care of paupers. It is significant that in this country even today most of the state mental hospitals are not under the control of a medical department but rather of a public welfare or similar agency of the state. Indeed the public welfare nature of the state hospitals in the State of Missouri was emphasized until recently by the very name of the governing agency, the State Board of Eleemosynary Institutions, now fortunately changed to the Department of Health and Public Welfare. It is not strange, therefore, that psychiatry, which was at that time a strictly intramural specialty, became more and more isolated from the stream of medicine. Even the physicians in the mental hospitals were isolated from the company

Address before Missouri State Medical Assoc., Kansas City, Missouri, March 28, 1949.

of their fellow physicians and looked upon as merely "asylum doctors."

What was happening to general medicine in the meantime? Virchow (1860) had propounded the cellular theory of pathology in the middle of the last century. Staining methods had been introduced in the 1880's. Bacteriology and pathology were developing rapidly, as was (later) biochemistry. Various special technics were developing in the field of physical diagnosis, and specialization was increasing apace. The tendency was more and more toward study of a particular part, of the minutiae of its disorders. This emphasis tended to promote neglect of the patient as a whole and to make of medicine a study of the organs and organ-systems of the patient instead. Medical education gradually became more and more complex, with more and more detail, again contributing to the partial view of the patient. It was well recognized, of course, that some diseases have no apparent organic basis, but these were rather lightly dismissed as being merely "neurotic" and if they did not respond to travel or bromides or miscellaneous surgery they were dismissed as being essentially incurable or due to "imagination."

Some physiologists, such as Sherrington, however, were giving consideration to the integrative action of the nervous system and in 1920, Cannon, the eminent physiologist of Harvard, presented his epoch-making work on the effects of fear and other emotions upon physical functioning. Thus the psychiatric approach to medicine owes much to the physiologists. It owes much as well, of course, to the psychiatrists.

Freud, beginning about fifty years ago, had cast a flood of new light upon the nature of mental mechanisms. Adolf Meyer, trained as a pathologist, propounded the doctrine that what is termed mental is merely one aspect of biological functioning, that the organism must be studied as a whole, that is, somatically, psychologically and in its historical environmental setting. William A. White, incorporating the Freudian discoveries into his philosophy of disease, emphasized eloquently and effectively the study of the patient as a whole. A large psychiatric literature has developed during the last twenty-five years, devoting itself not only to the patient in the mental hospital but to the various ambulatory manifestations of emotional disorder. Outpatient clinics have been set up. Effective treatment of the neuroses in community practice has developed greatly, and emphasis has been laid upon the prevention of emotional disorder—that is, mental hygiene. Unfortunately, too, a formidable psychiatric terminology has grown up, a terminology which has done much to discourage medical students and physicians from interesting themselves in the psychiatric aspects of practice.

The last decade has shown a marked change in the method of presenting psychiatry to the medical student. No longer is it taught by a few lectures only on the psychoses; rather are the relationships with the rest of medicine emphasized. The

normal development of personality, the various minor and major distortions of personality, the relations of the emotions to somatic symptomatology are stressed, with the aim of presenting the whole patient to the student. That this welcome trend in medical education will bear fruit in the coming generations of physicians seems inevitable.

It may be noted parenthetically here that almost every war has done its bit toward promoting interest in psychiatric problems. Pinel did his most significant work during the French Revolution. Charcot was teaching at the time of the Franco-Prussian War. Beard and Mitchell both reflected the results of experience in the Civil War in this country. World War I had an effect which is close to the minds of many of us, and the more recent war perhaps gave the greatest stimulation of all to a general study of psychiatric problems.

During the last fifteen years a new "specialty" has developed, namely, psychosomatic medicine. This specialty has been the outgrowth of the advances of psychiatry and of physiology and much interest has been developed in the study of the whole patient, that is, in his physical condition and the emotional factors in his illness. Great impetus has been given by Flanders Dunbar's work since 1938, and the significant studies of Harold Wolf and his associates. The term is not a new one. It was used in the psychiatric literature in Germany in 1838 by Nasse and Jacobi, who pointed out even then that there must be a fundamental investigation of the "simultaneously psychic and somatic activity" of man. As has been seen, however, interest in this study was almost nonexistent for the better part of a century and is only recently recurring. I have serious doubts as to whether psychosomatic medicine is properly a specialty of psychiatry. Indeed, I look upon it as rather indicating the proper approach of the medical man, no matter what his specialty. I am sure that it is as much the prerogative of the internist as of the psychiatrist to practice psychosomatic medicine, and probably a good deal more so.

The term itself is somewhat unfortunate as indicating what is not true, namely, that there is a soma which is separate from the psyche; the two cannot be considered separately. A more recent objection to the term comes from a perversion of its original meaning toward an interpretation of it as meaning "neurotic." Much is heard of "psychosomatic illness" as meaning illness in which physical symptoms are caused primarily by psychologic factors, i.e., are "psychogenic." The reverse situation, however, is equally important. Everyone who has physical disorder is to some extent and sometimes considerably affected by it emotionally; that is, his emotional reaction is somatically conditioned. Perhaps "comprehensive medicine" or even the more cumbersome term "psychophysiology medicine" would be preferable to the term "psychosomatic." Perhaps if one must use the latter word one should use a chemical notation and write it  $\text{psycho} \rightleftharpoons \text{somatic}$ . However, I



realize that these objections will probably not affect the use of a term which already has become thoroughly embedded in the medical literature, and even in common speech.

One other factor in a closer union should be mentioned, namely, the development of psychiatric wards in general hospitals. For a long time the Mosher Pavilion at the Albany General Hospital, built in 1902, was practically the only such ward in the United States, but more recently a number of general hospitals have provided psychiatric facilities. Certainly if a hospital is to hold itself out as "general" it should be prepared to take care of the entire patient and of any emergencies which may arise in his care. This policy is now being followed by the Veterans Administration in making all of their hospitals institutions in which patients may be cared for because of tuberculosis, mental disorder or some other general medical or surgical disability.

One hospital which has carried on a psychiatric service for more than ten years is the Massachusetts General. Dr. Stanley Cobb, the director of that service, has reported on a series of two hundred and sixty-nine patients.<sup>1</sup> Of this group sixty-four were suffering from medical disease with delirium, fifty-two others had a drug psychosis, alcoholic or other, while thirty-one were suffering from a surgical disorder with delirium, many of them being postoperative cases. In addition there were thirty-four with depressions, twenty-five other patients who had made suicidal attempts, and eighty-six others suffering from what are classified as psychosomatic disorders, largely neurocirculatory asthenia, colitis and thyroid disorder. The principal point of interest is that 54 per cent of the total number of cases reported, while clearly deranged mentally, owed their mental disorder primarily to the physical condition.

At this point it may well be asked "What has all this to do with the man engaged in the day to day practice of medicine in the community—the family physician?" The answer perhaps is that any physician who has been the proverbial "good doctor," who has been a successful family practitioner in the community, has been practicing psychiatry. Whether he knows it or not, whether he even admits it or not, no physician can practice successfully without taking into consideration the individual peculiarities and problems of his patient. No individual is like any other. All patients are different. No two people have precisely the same combination of genes, that is, they are not identical even as to heredity. Their nutrition, their relations with their siblings and with their parents are all different. The emotional influences to which they are subjected in school and in later life are different. That people differ in intellectual endowment is all too evident. Some interesting studies have recently been made by Fried and Mayer,<sup>2</sup> which indicate that something even as definite as the growth of children is affected adversely by their emotional maladjustment. This is but an example

of the effect upon the physical organism of emotional factors in a measurable way.

The emotional conditioning of people differs one from the other, the physique, the ability to withstand stress, emotional or physical, and the manner in which the patient reacts to that stress. These stresses, whether climatic, financial, social, marital, or whether due to internal conflict, are all factors in the day to day functioning of the individual, and it is not strange that frequently one finds serious breakdowns as a result of one or the other type of stress. The whole process of living represents an adjustment to the demands of the environment. Some of these adjustments are good; some are poor. Some of the maladjustments show themselves in physical symptoms, some in more predominantly emotional ways. The fact is that no disease is completely somatic or completely psychic. Every disease process exhibits both aspects.

The patient who is suffering from progressive and degenerative physical disorder will almost inevitably show some psychologic response to it. This may be one of repression; it may be one of denial; it may be one of exaggeration of physical symptoms, a desire for pity and attention. Dependent on the personality of the patient will be the physician's reaction to the patient and the degree to which he secures the patient's cooperation as well as the degree to which he takes the patient into his confidence. Other groups of disorders are the so-called "functional" disturbances of the circulatory and gastrointestinal systems; for example, these systems are especially prone to emotional influences. A gastric ulcer will produce a certain degree of irritability and despondency, but there is no doubt that increased emotional tension may readily aggravate the physical symptoms. Thus one has a vicious circle. It is as important to take cognizance of the stresses in the situation of the patient and to relieve them as much as possible as it is to prescribe the proper drugs.

In the field of the acute infections and the acute intoxications, delirium is not uncommon. One should not think of sending the delirious patient to the mental hospital; he should be cared for in a general hospital. That includes the patient who is suffering from alcoholic delirium as well as from the delirium of fever. The treatment, of course, is aimed at the removal of the exciting cause, but often careful nursing is called for which cannot be rendered at home. The phenomena of delirium are familiar to the general practitioner. It is not always realized how readily the patient who is mildly delirious will respond to mild measures, such as reassurance, a darkened room and cool applications to the head.

Again one must consider the psychotherapy of the patient as well as the removal of the immediate cause. Some patients go to the physician with vague physical complaints for which no organic basis can be found. These cases, particularly, call for an investigation of the emotional factors and

what is it that the patient is trying to express by his symptoms. In this group one should look for the possibility of a prevailing mood of depression. Alvarez, indeed, has recently been quoted as advising that one always ask the patient "Are you happy?" Sometimes the patient suffering from an early depression has vague symptoms such as uneasiness in the gastrointestinal tract, constipation, lowered energy and a feeling of being "sick all over." Accompanying this may be a feeling of sadness and unworthiness, which in some cases unfortunately if not recognized may lead to suicide. Nor should it be thought that because the patient threatens suicide he can be depended upon not to attempt to damage himself; that legend dies hard. The family physician can handle many of these problems. In the first place, the patient feels confidence in him, and is usually ready to cooperate with the physician if given an opportunity to unburden himself and to discuss his symptoms freely.

Psychotherapy is a broad term. There are many types and many degrees of depth. Psychotherapy is certainly not synonymous with psychoanalysis. Psychoanalysis is one valuable form of psychotherapy but it is a lengthy procedure, one to be practiced by the highly trained in that field and not one which is applicable to all cases. It furnishes, of course, the basis for many briefer psychotherapeutic procedures. Many patients respond to simple reassurance, to ventilation of their symptoms or to a mild degree of support. Some require more detailed psychiatric treatment than the ordinary practitioner feels competent to give. It is my impression that the present attitude of the public with regard to the psychiatrist is much less one of shyness and avoidance than it used to be. It is clearly recognized by a large segment of the public that the psychiatrist is interested in far more than the out-and-out psychotic, that he can be of assistance to the emotionally distressed, so that when a psychiatrist is available the family physician is likely to meet less resistance than he would have formerly should he feel that intensive psychiatric treatment is called for.

A recent study of a thousand consecutive patients referred to the Lahey Clinic for a general medical examination has been reported by Allen and Kaufman.<sup>3</sup> Of this group, 134 showed both mental and physical disorders and that 272 had some degree of

psychiatric disturbance. Of these seventy-five were clearly cases of psychoneurosis but there were 321 others which the authors refer to under such terms as chronic nervous exhaustion, nervous fatigue, simple anxiety, nervous instability and so on. These patients were looked upon as primarily in the field of the family physician, provided there were thorough examinations and an understanding attitude, tact and patience. There are, in short, many degrees of emotional disturbances. Patients clearly suffering from psychoneurosis and from the more serious disorders called for psychiatric reference.

It seems certain that even if it were desirable not all patients showing psychiatric disorders can ever to be referred to psychiatrists for the simple reason that the supply of psychiatrists is altogether inadequate. It is and will continue to be the province of the family physician to care for the general run of patients suffering from emotional disturbances. Various advances are being made in the field of psychotherapy and other advances in therapy are being brought about. The "shock treatments," for example, although sometimes too enthusiastically advocated, have clearly limited the duration of attacks of depression. All forms of approach to the problem of diagnosis and of treatment are necessary. There is no panacea; there is no cure-all. Psychotherapy is indicated in some instances and indeed some form of psychotherapy is an inherent part of the treatment of the patient although not necessarily under that name. Careful physical examination is important for it must not be forgotten that even a patient suffering from a neurosis may develop an organic disability as well. By the methods best suited, with tact and understanding, the patient must be guided to a mature way of dealing with his situation. He must understand the relation of his symptoms to the particular maladjustment which he is suffering. In achieving this end the family physician, the man whom the patient trusts, the man whom he knows to understand him and to be tolerant of him, will play an important and, indeed, an essential role.

#### BIBLIOGRAPHY

1. Cobb, Stanley: Psychiatry in a General Hospital, *Bull. N. Y. Acad. Med.* 22:137 (March) 1946.
2. Fried, R., and Mayer, M. F.: Socio-Emotional Factors Accounting for Growth Failure in Children Living in an Institution, *J. Pediat.* 33:444 (October) 1948.
3. Allan, F. N., and Kaufman, M.: Nervous Factors in General Practice, *J.A.M.A.* 138:1135 (December 18) 1948; see also Groom, D.: Some Applications of Psychiatry in General Practice, *J.A.M.A.* 135:403 (October 18) 1947.

#### DROP IN PELLAGRA CASES

Pellagra is almost disappearing in Cincinnati, Ohio, records of the Cincinnati General Hospital show.

Writing in the July 9 *Journal of the American Medical Association*, Drs. William B. Dean, Richard W. Vilter, and Marion A. Blankenhorn, from the Department of Internal Medicine of the College of Medicine, University of Cincinnati, say that data

on admissions to the hospital in the years 1935-1947 show a striking decrease in the incidence of pellagra.

They point out that the number of patients with the disease admitted to the hospital fell from thirty-four in 1939 to three in 1940. In 1946 and 1947 there were no cases of pellagra in the medical wards of the hospital, and only one patient with the disease had been seen there up to July, 1948.



# SELECTION OF AN OPERATION FOR LESIONS OF THE COLON AND RECTUM

A CLINICAL STUDY WITH REPORT OF SIXTY-NINE CASES

HOWARD MAHORNER, M.D., *New Orleans, La.*

AND

MANSON BROWN, M.D., *New Orleans, La.*

DURING RECENT years many improvements have been made in surgery of the colon and rectum. Accumulating data have clarified many of the problems; new protective measures have been discovered, old measures have been refined, and variations and improvements in different operations have resulted in a choice of several types, no one of which is best for all the individual technical problems arising in the different patients. One or another procedure may be a choice to produce the best result, particularly for lesions of the rectosigmoid and rectum. There is one thing that is almost universally admitted, and that is that a colostomy is an undesirable thing and, if it can be avoided with an equal chance of life and cure, it should be avoided since it may be regarded as leaving the patient incompletely well and unrestored to full health. It has been our policy, where possible, to restore continuity and avoid colostomy. This paper presents the sixty-nine colon resections performed on our private service during the five years, 1944 through 1948. The group of cases for which these operations were performed had a high resectability rate, characteristic of private surgery (more than 90 per cent).

Our policies, regarding surgical problems of the colon, include (a) the exercise of increasingly aggressive measures for early diagnosis, (b) the use of varied and flexible choice of operations, (c) adherence to rigid standards of minute surgical technique, (d) a constant search for improvement in preoperative and postoperative care.

Searching diagnostic measures applied to problems affecting the colon involve many aspects. A careful history is the foundation for working out an established diagnosis. The patient must be assessed for altered or aberrant bowel habit, anemia, weight loss, abdominal distress or tumor of any type, melana or frank hemorrhage. When suggestive symptomatology is elicited an intensively objective study is essential. The diagnosis of these lesions, particularly in an early stage when stripped to its last analysis, is based upon the substantiation of the suspicion that they are present by two special examinations, namely, proctosigmoidostomy and fluoroscopic and roentgenographic examination with barium enema and contrast air studies of the colon. It takes an expert roentgenologist to locate many of these lesions by x-ray examinations. How

many carcinomas finally diagnosed at a late stage have been overlooked at a previous x-ray examination because of inexpert studies? On the other hand, it does not take an expert, nor an experienced man, to diagnose a carcinoma in the area of the rectum where the diagnosis can be established only by employment of the proctoscope; that is in the area between 8 centimeters and 22 centimeters from the anal outlet. The last generation of physicians taught this one "to stick their fingers in the rectum" when making examinations; this generation must in addition to that teach the next one to put a proctoscope in the rectum. For some reason it is a general impression that the use of the proctoscope is dangerous. Such is not the fact; on the contrary, it is a safe and an easy instrument to use, and every clinician and diagnostician should own and use one. Only by such wide spread use of this instrument will early diagnosis of cancer of the rectum become customary.

All too frequently there are missed opportunities for the early diagnosis of lesions unappreciated because they are clinically latent in the cecum's fluid stream, lesions in the splenic flexure, malignant degeneration in the unsuspected left colon polyps and rectal carcinomas bleeding but never viewed in the proctoscope.

A delicate point, but one demanding exposure, is the lack of "surgical consciousness" in some of the profession. There is the feeling among certain doctors, not even found among laymen, that since they cannot do it, it cannot be done, and thus the thought that there is a carcinoma of the colon results in the reaction that it is just too bad; the patient cannot get well anyway. With mortality rates for colon resection increasingly on the decline and in the hands of many able surgeons now approaching a rate well below 5 per cent, the morbidity inherent in diverticulitis, megacolon, endometrioma and the risk inherent in polyposis and carcinoma, render consideration of the benefits to be derived from surgery well worthwhile, for surgical intervention offers a high expectancy of permanent cure.

*Preoperative and Postoperative Care.*—Important measures in the management of these cases include detailed preoperative and post operative care. Attaining a collapsed clean bowel is perhaps the most important single feature of the preparation. With care to avoid nutritional privation the diet for forty-eight hours preceding the operation consists of liquids only. Catharsis is utilized to as-

sist in emptying the gastrointestinal tract. An enema is given daily for several days prior to the operation. The preoperative correction of dehydration, anemia, and protein depletion is routine. Sulfasuxidine or sulfathalidine are used in total doses of from 65 to 75 gms. accompanied by parenteral administration of vitamin K. The desirable reduction of the coliform organisms diminishes the latter's metabolic contribution of enteric vitamin K. Moreover, the slowed metabolic gradient in the carcinoma age group necessitates the generous use

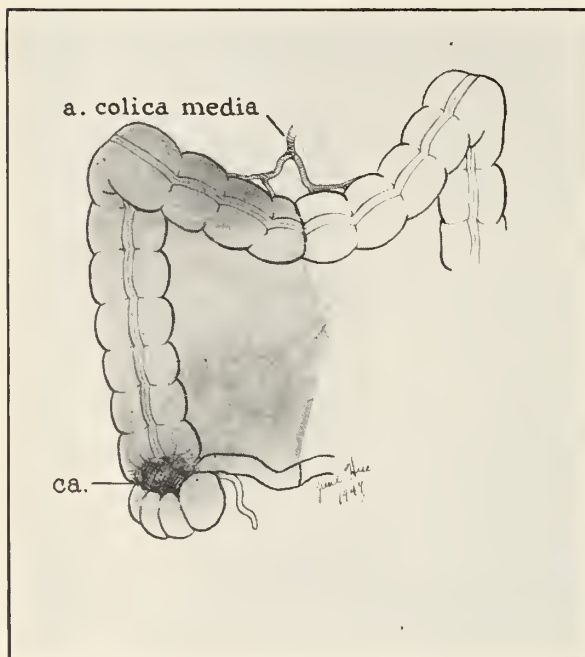


Fig. 1. Illustrates the extent of the resection advisable for carcinomas of the cecum and ascending colon. After mobilizing the ascending colon, the right colic artery should be ligated near its origin and the terminal ileum, the entire ascending colon and the right half of the transverse colon is resected. By this extensive tissue removal it is possible to remove regional glands.

of albumin, vitamin C, and the vitamin B complex. Preoperative transfusions frequently are given before operation and are repeated as often as conditions indicate this necessity.

The use of antibiotics, in our group of cases, consisted of preparation of the colon with insoluble sulfonamide, administration in the pre-operative phase also of heavy doses of penicillin intramuscularly and the treatment of certain complications with the addition of streptomycin.

Penicillin was utilized preoperatively as well, especially where there was evidence of preoperative inflammation such as chronic bronchiectasis, active diverticulitis or suspected inflammatory changes in a carcinoma. It is routinely given the night before the operation. Sulfasuxidine was used in our cases in dosages of 16 gms. daily during four days of preoperative preparation. Given crushed in jelly or jello, it is acceptable to the patient and furnishes a bowel which at surgery contains a viscid clean fluid. Sulfathalidine was used in

comparable doses and for similar indications, but it seems to produce a plastic type of stool which tends to obstruct the stoma or the enterostomy. Reduction of the coliform organisms by these sulfonamides may increase the bleeding and clotting time in some instances, so vitamin K was used preoperatively to prevent increased bleeding tendency.

Postoperative measures of significance are the ready use of transoral gastric suction, adequate parenteral fluids and electrolytes, oxygen tents particularly in debilitated patients, the prophylactic routine use of penicillin to avert pneumonitis and other complications and the occasional use of streptomycin for wound or urinary complications. When the use of indwelling urethral catheters is continued beyond the antibiotic stage of the convalescence other urinary antiseptics such as sulfadiazene were substituted.

Experience leads us to decry hasty resort to prostatic resection in men after abdominoperineal resection. Most of these patients have considerable trouble with complete bladder emptying because the operation interferes with the nerve supply to the bladder. In elderly men with mild to moderate prostatic enlargement one may be tempted to superimpose a prostatic resection upon the rectal resection, but restraint and patience often will make this unnecessary.

*The Operations.*—The choice of a surgical procedure is in each case an individual problem. Lesions of the right colon in this group of cases were regularly subjected to right hemicolectomy with end-to-end ileo-colostomy of a special type. A closed aseptic anastomosis was made using two Furniss clamps. The diameter of the colonic lumen is reduced to that of the ileal lumen by turning in "dog ears" on the colon and end-to-end anastomosis may be established. A Witzel enterostomy then is created in the transverse colon just distal to the anastomosis. A multiperforated large French catheter (18 to 22) is introduced through the colon

Table 1. COLON RESECTIONS. Five Year Period  
(Jan. 1, 1944 to Jan 1, 1949)

Ascending Colon .....	10
Transverse Colon .....	2
Descending Colon .....	1
Sigmoid .....	14
Recto Sigmoid .....	13
Rectum .....	28

The location of lesions for which resections of the rectum or colon were done on a private service in a period of five years. Note that fifty-five of the cases had lesions in the sigmoid or rectum where abdominoperineal resection is commonly used as the operation of choice for carcinoma.

and is passed back through the anastomosis. This decompresses the ileum in the region of the anastomosis as well as the colon, and it assures the patency of the anastomotic lumen.

Technical removal of lesions from the transverse colon is accomplished after careful identification of the middle colic artery. When these lesions are located far to the right or left of this vessel mobilization of the corresponding flexure permits adequate removal of tissue and the anastomosis may be accomplished without difficulty. The retrograde trans-anastomotic enterostomy is then made to



protect the suture line in the immediate postoperative period. One technical point upon which we place much importance is removal of the omentum when the carcinoma affects the transverse colon or its flexures. Under certain circumstances the "policeman of the abdomen" becomes a potential miscreant and should be eliminated. By removal of the omentum contiguous metastases may be obviated, more precise anastomosis is obtained and postoperative obstruction from matting of the omentum may be prevented.

The flextures, hepatic and splenic, are best approached through a transverse incision. This permits generous mobilization of the colon under vision and after adequate resection primary anastomosis may be accomplished. The descending colon and sigmoid colon may be resected and primary anastomosis established. We like to place a catheter in the cecum as a Witzel type of enterostomy as a decompressive measure since a competent ileocecal valve may interfere with transgastric decompression of the colon.

**Rectosigmoid and Rectum.**—We employ any one of three types of operations for carcinomas of the rectosigmoid and rectum; either anterior resection and primary anastomosis or the Hockenegg-Bacon pull through operation or the Miles type of abdominoperineal resection. In general, when the edge of the lesion is at least 11 centimeters from the anal margin, anterior resection and anastomosis usually can be accomplished. If it is between 11 centimeters and 5 centimeters above, the anus the Hockenegg-Bacon operation may be chosen and, if it is below 5 centimeters up an abdominoperineal resection is performed. Other factors may influence the choice of operation including size of the lesion, its grade according to Broders classification, and its apparent type according to Duke's classification.

When the lesion is in the rectosigmoid or upper rectum the abdomen is opened through a low midline incision with the intention of performing an anterior resection and anastomosis, the upper abdomen is explored for metastases. The sigmoid and upper rectum are mobilized and, if the resection has to be below the peritoneum, the superior hemorrhoidal vessels are ligated. At this stage for reasons of metastases or size of the growth or low position of the lesion, the operation may be converted into an abdominoperineal resection or a Hockenegg-Bacon pull through procedure for the upper part of each is essentially the same.

If an anterior resection and anastomosis has been performed and the anastomotic site is low, a temporary proximal transverse colostomy is established.

Many carcinomas of the rectum so situated that the lower margin is from 5 to 11 centimeters above the anal outlet may best be removed by the Hockenegg-Bacon procedure. This is an invaluable method of avoiding colostomy when carcinoma is low, and small and movable, and yet sufficiently high above the levator ani muscles. The intra-abdominal

portion of the operation consists in mobilization of the rectum from the pelvis as in anterior resection and Miles abdominoperineal resection. If the lesion is deep in the pelvis, yet a few centimeters above the levator and muscles and if the rectum may be adequately mobilized, the freed sigmoid is packed into the pelvis, a new pelvic peritoneal diaphragm is constructed about it and the opera-

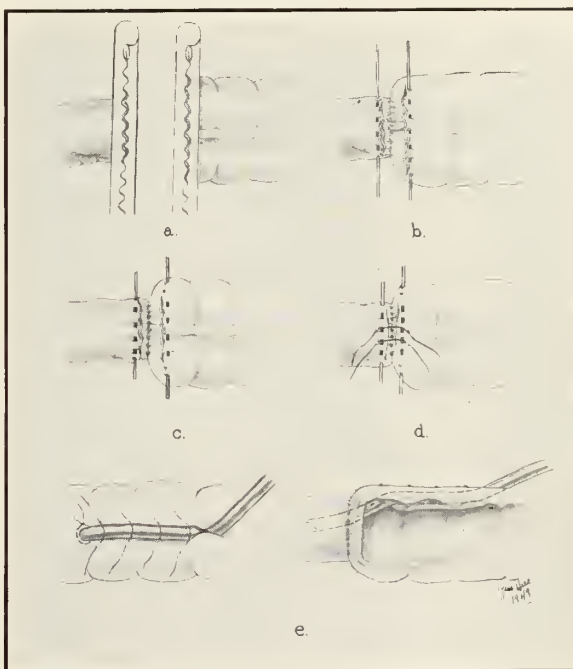


Fig. 2. Illustrating a technical method of reestablishing continuity after resecting the terminal ileum and right hemicolon. An end to end anastomosis between the ileum and colon may be established by using two Furniss clamps. The "dog ears" on the colon are inverted in order to make the anastomotic lumen coincide with the width of the ileum. A double row of interrupted silk stitches is placed posteriorly and anteriorly and the Furniss pins are removed. A retrograde enterostomy is established by putting in a catheter just distal to the anastomosis by the Witzel method. The catheter is then passed through the anastomotic stoma. This maintains decompression at the anastomotic site both proximally and distally, and at the same time insures the patency of the lumen.

tion continued posteriorly. The anal outlet is closed with a suture and the sphincter is dissected away from the mucosa and sufficiently dilated. The lavator attachments are severed from the rectum and the rectocolon is pulled out through the dilated sphincter. A black silk marker thread, placed previously at the point of adequate circulation during the abdominal procedure, is identified as the bowel moves outward. Excess bowel beyond this point is sacrificed, and a rectal tube is sewed into the lumen. The slough occurs usually at the skin margin. A Penrose cigarette drain is placed behind the bowel into the hollow of the sacrum.

When the lesion is too low to justify preservation of the sphincter mechanism (2 to 5 cm.) the abdominal dissection of the rectosigmoid is performed and a sigmoid colostomy is established and the lower sigmoid and rectum is removed by completing a Miles abdominoperineal procedure.

The cases presented are those of a private referred surgical service. They comprise sixty-nine consecutive resections of the colon and rectum over a period of five years (January 1, 1944 to January 1, 1949). Of these, forty-one were subjected to resection with primary anastomosis. In one patient a lesion of the splenic flexure complicated by local extension perforation and abscess formation was resected by preliminary colostomy and obstructive resection. Eighteen cases were subjected

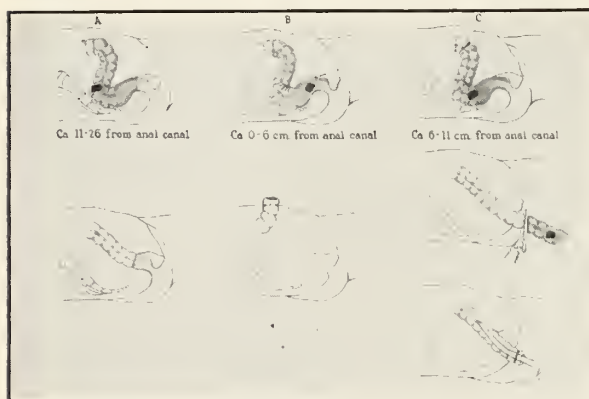


Fig. 3 There are many types of operations available for removing carcinomas situated in the distal sigmoid, the rectosigmoid and the rectum. We prefer using one of three types of operation depending on the location, grade and size of the lesion. If the lesion is in the rectosigmoid or upper rectum, that is 11 centimeters or more above the anal outlet, a transabdominal anterior resection of the rectum with restoration of continuity may be accomplished with adequate removal of regional lymph nodes. If the lesion is in the mid rectum, that is between 5 and 11 centimeters above the anal outlet and if the growth is small, movable and of a relative low degree of malignancy a pull through operation would be our choice of procedure. On the other hand, if the lesion is low, that is at the level of the levator ani muscles or in the lower 6 centimeters, in order to be adequately radical we would choose to do an abdominoperineal resection. In each instance the operation starts in the abdomen and is identical in scope down to the levator ani muscles. The procedure may be converted into any of the three types. The upper part of an anterior resection is just as radical as an abdominoperineal resection; in only the lower segment, that is last 6 to 8 centimeters, does the degree of radicalness of the procedure vary.

to the Miles abdominoperineal resection. In ten patients restoration of continuity was attempted by anastomosis from a posterior approach. Five of these were open ischial anastomoses of the mobilized sigmoid to the rectal ampulla, an operation we no longer perform. The other five were the Hochenegg-Bacon type of pull through agglutination anastomosis of the mobilized sigmoid to the denuded anal sphincter. In forty-seven cases of carcinoma of the rectosigmoid and rectum in locations where lesions are commonly removed by the abdominoperineal resection, continuity was restored in twenty-seven. Restored gastrointestinal continuity was afforded to forty-eight of these sixty-nine cases at a primary operation.

It is our opinion that the five subjected to posterior ischial reanastomosis could have been better handled as Hochenegg-Bacon operations, and at this stage of our experience with these operations we would choose the latter procedure for lesions at that level.

Preliminary decompressive colostomy was performed in three of these cases. These were all obstructed. In one of these three, restoration of continuity was later established after resection of the lesion. The other two remained colostomies after the resection. This focuses attention upon the fact that we find it seldom necessary to resort to surgical deflation of the bowel by colostomy in preparation for resection. A liquid diet, catharsis when there is no obstruction, and multiple enemas, together with twelve hour preoperative use of Wangenstein gastrointestinal suction are relied upon for preparation of the bowel lumen. On the other hand it has come to us, not alone by teaching, but by regretful experience, that the risk of an operation is increased tremendously when any sort of anastomosis is performed on a segment of intestine even moderately obstructed. Primary anastomosis should never be done under such conditions and, if the obstruction exists, an adequate colostomy should be established proximal to the obstructing lesion which later, under improved operating conditions, may be resected. This lesson need not necessarily be learned by the personal experience of each new surgeon, but human nature is such that this principle, even though known, may remain unconfirmed except by regretful personal loss.

Complementary enterostomy was utilized in thirty-three cases. This was usually a Witzel cath-

Table 2. TYPE OF OPERATIONS

Right Hemicolectomy .....	11
Segmental Resection .....	
Transverse Colon .....	1
Splenic Flexure .....	1
Descending .....	1
Anterior Resection .....	
Sigmoid .....	14
Recto-Sigmoid .....	5
Rectum .....	8
Abdominoperineal Resection .....	18
Pull-Through Operation .....	5
Abdomino-Ischial Resection .....	5

#### SIGMOID, RECTOSIGMOID AND RECTUM. ULTIMATE RESULTS

Cases .....	55
Carcinoma .....	53
Restoration Continuity .....	37
Abdominoperineal .....	18
Ultimate Colostomies .....	21

The type of operations done in a group of sixty-eight cases. Of fifty-three carcinomas involving the sigmoid, rectosigmoid or rectum, abdominoperineal resection was chosen as the operation in only eighteen and permanent colostomies were left in only twenty-one patients. This emphasizes our attitude of restoring continuity wherever it is feasible without jeopardizing the expected cure rate. Although figures have not been compiled accurately to show that the five years survival can compare favorably with abdominoperineal resection, it is probable that for carcinomas high in the rectum or in the rectosigmoid resection with anastomosis will have just as favorable a five and ten year cure rate as will abdominoperineal resection. In addition to that, the patients are restored to full health.

eter enterostomy made with a long peritoneal tunnel over a No. 18 or 20 French catheter. A few times a large, soft rectal tube was passed up through the site of a low anastomosis. In our experience this type of vent is inefficient and insecure.

In restoring intestinal continuity where practicable, a closed anastomosis was used. This was done in twenty-eight cases of anterior restoration, utilizing Furniss clamps or the Parker-Kerr type of anastomosis. On the other hand we have no



strong aversion to open anastomosis if it is performed carefully without spillage.

Open anastomosis is by choice employed in operations below the line of the peritoneum. It has the advantage of being a little more secure and leak proof than are aseptic anastomoses made with double layers of interrupted sutures. In twelve cases of anterior primary anastomosis, an open type of closure was accomplished. Open or closed, the anastomosis consists of two layers of sutures. The open is performed with an outer interrupted silk layer of sutures and an inner through and through catgut layer; and closed with a double layer of interrupted black silk stitches. The opening in the mesentery is closed with two or three carefully placed silk sutures.

*Lesions Encountered.*—The lesions encountered in our group of cases followed the distribution commonly found in other reported series. Of sixty-three carcinomas, 66 per cent or forty, were located within the sigmoid colon and rectum, and another eight were located in or near the cecum. Five of the carcinomas demonstrably arose from polyps. Benign polyps were present in association with carcinoma in six others. Four other carcinomatous lesions presented associated diverticulitis. One of these apparently originated in a diverticulum.

One primary anterior resection was performed for chronic disabling diverticulitis with abscess formation and obstruction. A wide resection was accomplished, as is necessary in these cases to have normal tissues with which to perform the anastomosis; another resection was done for hemorrhage from diverticula.

Three primary resections were performed for granulomas of the cecum. One of these was encountered unexpectedly in an emergency laparotomy for a fairly typical attack of acute recurrent appendicitis. Two were in patients with long standing symptoms related to the lesion. Right hemicolectomies were accomplished in all with resultant benign postoperative courses.

One woman of forty-eight presented an obstructing lesion of the rectosigmoid which proved at anterior primary resection to be an endometrioma. She had been sent by a doctor who, while performing a hysterectomy for endometriosis, noted a mass in the sigmoid. He felt it might be a malignancy since it was separate from other evidence of endometriosis. Two patients had large pseudosegmental megacolon involving the ascending portion. In each instance the probable cause was partial obstruction due to a cicatricial band sharply occluding the middle of the transverse colon. The other was essentially a recurring volvulus of an abnormally mobile right colon, and this patient presented one of the cecal granulomatous lesions described. Both patients were operated upon by primary resections, and they recovered rapidly.

*Mortality.*—Of the sixty-nine patients subjected for various reasons to colectomy, six died during the hospital stay. Of these deaths, two were operative

and anesthetic losses. One, an obese female of 55 years, suffered a marked fall in blood pressure during the perineal portion of the operation. Her death was partially due to hemorrhage and also to another technical factor because the position was changed from supine to prone under spinal anesthesia. The change, itself, we now know, tends to bring about a fall in blood pressure, and, we also know now that the prone position, particularly in the obese individual, interferes with respiration, preventing, as it does, the descent of the diaphragm. Thus, shock is enhanced after the abdominal part of an abdominoperineal resection. We now convert the position to a lithotomy for the perineal part, and this is much safer for the patient. Another frail woman of 76 years tolerated right hemicolectomy well, then died suddenly when a supplementary anesthesia was initiated as the wound was being closed.

A 56 year old man with an impaired cardiovascular system enjoyed an uncomplicated early postoperative course after left colon resection, but died of acute coronary occlusion on the twenty-first postoperative day.

A hepatorenal death supervened in a 48 year old woman who came to the hospital distended and who was prepared by cecostomy and subjected, after delay, to right hemicolectomy. Although small superficial liver metastases were noted at surgery, the autopsy revealed her liver to be almost replaced by carcinomatous material.

The two remaining deaths were both in males less than 50 years of age in good condition, in whom low left anastomoses were performed without benefit of complementary or preliminary colostomy. Both were essentially anastomotic failures, one dying on the fifth postoperative day of peritonitis, the other on his fifty-ninth postoperative day with spreading Meleney infection of the lower abdomen. These two deaths make us now realize that whenever a low subperitoneal primary anastomosis is performed after resections of the rectosigmoid and upper rectum a complimentary colostomy should be made, and it may be lifesaving. We still depend upon catheter cecostomy as a decompressive measure when the anastomosis is made with good serosal covering on each segment.

#### SUMMARY

A group of sixty-nine consecutive unselected colon resections is reviewed with respect to surgical policy and management. The resectability rate was in excess of 90 per cent of such cases seen during that period. The hospital mortality rate was 8.7 per cent.

We favor restoring continuity in the resected colon or rectosigmoid and rectum and prefer to do it at a primary operation if the bowel lumen is unobstructed. Obstruction is a contraindication to primary anastomosis. A catheter enterostomy may be suitable protection to the suture line when the anastomosis is made between segments of bowel with a peritoneal covering but, when primary

anastomosis is made below the peritoneal reflection, a complimentary temporary transverse colostomy should be made.

In forty-eight of our cases, gastrointestinal continuity was restored; intestinal continuity was restored in twenty-seven patients with carcinoma of the sigmoid rectosigmoid and rectum. Only twenty-one of sixty-three persons with carcinoma were subjected to permanent abdominal colostomy.

Of the six deaths five are considered to have been "avoidable." There were two anastomotic failures

in primary restoration of continuity for low left sided lesions. Neither had complimentary colostomy at the time of resection, a precaution which may have saved them. Careful judgment and careful selection of operations from the various ones which are available for these different problems, unfettered by a policy to do only one type of operation for all cases, may result in a high percentage of cure and a high rate of restoration of these patients to complete health.

812 Gravier Street.

## IMPROVED METHODS IN COMBATTING TETANUS

CYRIL COSTELLO, M.D., *St. Louis*

DEATHS OCCURRING recently at the St. Louis City Hospital from tetanus infection have warranted a critical survey of cases seen there during the last decade as well as an inventory of advances which have been made in the field and reported by many investigators during this same period.

Conflicting opinions as to the proper therapeutic and prophylactic methods not only in this hospital but in many others indicate that there is need for proper evaluation of those facts about tetanus which are known and established and those which remain unknown.

While advancements have been made in the study of tetanus during recent years, the review of cases in this hospital, as well as in others, indicates that medical practice generally has not kept the pace. For this reason, it should be of benefit to outline a rational course of therapy in the light of present knowledge and to recommend that this regime be followed rigorously in order to combat mortality in a disease which at best will continue for some years to claim many lives.

### HISTORY

As pointed out by Firor,<sup>7</sup> it is not surprising that a disease with such dramatic manifestations as those of tetanus should have been recognized early. It was first described by Hippocrates and later by Craeteus and others. The nature of the disease remained obscure until two Italians, Carle and Rattone<sup>10</sup> discovered in 1884 the transmissibility of the disease to animals by injecting pus from the wound of a human suffering from tetanus. Nicolaier<sup>10</sup> produced the disease in animals by inoculating them with earth and noticed the organisms in the wound and observed that they remained localized. Kitasato<sup>10</sup> cultured the organisms in 1889 and established the clostridium tetani to be the etiologic agent in satisfying the Koch postulates. In 1890, Kitasato discovered the tetanus toxin and, in 1892, the antitoxin.

The infection may be produced by contamination with clostridii in any break of continuity in mucous

surfaces or integuments of the body. That this break need not be large or grave, from any other viewpoint, has been demonstrated in the study of the cases at City Hospital. In these, fatal tetanus infections resulted from a variety of wounds, many of which were thought to be trivial in extent. Such common injuries as a simple abrasion and extraction of a tooth are seen to be followed by tetanus and death (table 1).

Attention was drawn to the fatality from tetanus infection in injury wounds in World War I. Subsequently in civilian practice it was learned that the incidence of death due to puncture wounds and lacerations could not be ignored and for the most

Table 1. *Source of infection with clostridii tetani in 26 cases.*

<i>Nature of Trauma</i>	<i>Site of Trauma</i>
Nail Puncture 4.....	Toe 1; Foot 3
Splinter Puncture 3.....	Toe 1; Leg 2
Therapeutic pneumothorax 1.....	Chest 1
Gastro-enterostomy 1.....	Intestinal tract 1
Criminal Abortion 2.....	Uterus 2
Laceration from fall 1.....	Scalp 1
Laceration 2.....	Hand 2
Furuncle 2.....	Wrist 1; Jaw 1
Abrasion 3.....	Toes 1; Knee 1; Finger 1
Freezing 1.....	Toes 1
Extraction of tooth 2.....	Jaw 2
Crush in rollaway bed 1.....	Finger 1
Rake puncture 1.....	Leg 1
Minor puncture on Vacuum Sweeper.....	Finger 1
Hernial injection by physician .....	Inguinal region 1

part prophylactic treatment has been utilized only for those who appear to have sustained large wounds or grossly contaminated wounds. McDonnell et al<sup>3</sup> have reported a series of 721 nail puncture wounds in which they selected only those which were deep or which were infected or grossly contaminated to be given antitetanic serum. While these workers found no cases of tetanus in those selected for no antitetanic serum, this practice generally should be condemned, particularly since there is ample evidence that despite most careful selection of cases for prophylactic treatment, fatalities do result. Once clinical tetanus is evident, the chances for then salvaging life are poor. Various mortality rates have been reported but as in many other diseases, the best mode of treatment is still its prevention. The mortality rate in established cases of tetanus infection remains between

From the Departments of Surgery, St. Louis City Hospital and the Washington University School of Medicine, St. Louis.



50 and 80 per cent, just what it was a hundred years ago.

This mortality rate may depend on several factors. The size of the bacterial dose and the toxin producing qualities of the infecting strain are variables to be considered. These are uncontrollable and unpredictable factors. The third factor is method of treatment and it is this factor (a controllable one) that challenges the clinician.

#### ANALYSIS OF TWENTY-SIX CONSECUTIVE TETANUS CASES AT ST. LOUIS CITY HOSPITAL

Twenty-six patients have been treated at St. Louis City Hospital for tetanus infection during the last ten years (table 1). Of these, twenty-one patients (80 per cent) died. The nature of the wounds is cited in table 1. In the control of convulsions, Barbiturate, morphine, ether or curare was used in every instance. The amount of antitetanic serum administered varied from 20,000 units to 260,000 units and it was given intrathecally to seven patients. Of the latter group, one patient developed meningitis.

Respiratory failure was a striking feature of the death in fatal cases despite artificial maintenance of respiration in some instances.

In those patients who recovered, the incubation period varied from one day to nineteen days while, in those who died, the incubation period varied from five days to six weeks. There was no discernable relationship between incubation time and course of the disease or mortality.

#### TREATMENT OF TETANUS INFECTIONS

The management of patients with clinical manifestations of tetanus has varied, as it usually does with diseases in which the *modus operandi* of a lethal agent is obscure. It is not definitely established that any form of treatment has produced reduction in mortality rate although there are rays of hope in such reports as that made by Vener and Bowers.<sup>10</sup> They have treated a total of 100 cases with a mortality rate of 19 per cent. Such a report is encouraging although, without detracting credit from the spectacular results of these workers, the variable factors of bacterial dosage and toxin virulence must be reserved as possible contributors to this unusually low mortality figure. The frightful incidence of fatality in this disease has led to almost heroic measures in combatting its symptoms and signs and it is in this perspective that well meaning clinicians might be led to producing more harm than good to their patients. While as yet success in solving the ultimate riddle in tetanus fatality has not been attained, a process of trial and error and a method of elimination has attained a good idea of what principles of therapy are injurious and which are beneficial.

The treatment of tetanus includes considerations of: (1) methods to combat convulsions, (2) methods to combat toxin formation, (3) methods to neutralize toxin already formed and disseminated, and

(4) methods to prevent and combat common complications.

By reviewing and reevaluating these methods one may arrive at a rational program of management which will offer optimum advantages and will avoid added injury.

(1) *Methods designed to combat convulsions.*—In speaking of tetanic convulsions it should be remembered that there are two stages in the development of the muscle symptoms of tetanus. The first stage is that of muscle spasm and the second is that of clonic muscle convulsion which is superimposed subsequently. It is not always possible to recognize the local muscle spasm as it may have become generalized by the time the patient presents himself to his physician. Abel<sup>20</sup> and Harvey<sup>21</sup> demonstrated conclusively the local effect of tetanus toxin in producing localized muscle spasm. Abel's associates were then able to reproduce the clonic phase of muscle contraction independent of local spasm by injecting tetanus toxin into the anterior horn cell region of a dog's spinal cord. Thus was demonstrated the local effect of tetanus toxin, first, in the muscle and, second, in the anterior horn cells of the spinal cord. It was during the performance of these experiments on the spinal cord that a striking phenomenon was observed. As little as 1/400 of the ordinary intravenous lethal dose when injected into the spinal cord consistently produced death.<sup>22</sup> Work of Firor, Shunacher and Lamont<sup>7</sup> have led us to a new concept of the cause of death in tetanus. It is known that the time honored theory of death from effects of convulsions *per se* is false. These workers demonstrated deaths in animals in whom there were no convulsions. Death resulted from medullary center (respiratory and cardiac) paralysis due to a second (theoretic) toxin produced by the action of tetanus toxin in the central nervous system. This view, established experimentally, is substantiated by clinical observations. In the series at City Hospital death suddenly from respiratory paralysis even after evidence of improvement from convulsions has been a remarkable feature. Control of convulsions is to be desired, but it must be obtained without further repressing the vital centers of cardiac and respiratory action.

In controlling convulsions, a number of drugs have been recommended and used. These have consisted of barbiturates (avertin, phenobarbital, seconal), ether, paraldehyde, chloral hydrate and curare. Some form of barbiturate was used in every case treated at City Hospital during the last decade. Has this been wise in the light of present knowledge?

The drug chosen for the purpose of minimizing or eliminating convulsions should be one which (1) may be used for a long period of time and (2) has a wide margin of safety in avoiding vital center repression. The barbiturates and ether become immediately interdicted on the basis of these two requisites. Curare has had great appeal to some for it appears to have a rational use in paralyzing muscle without affecting the vital centers. It has

Age Sex	Source of Infection	Localized Tetanus	Generalized Tetanus	Course	Result	Treatment	Local Treatment	Additional Comments
45 F	Nail puncture of left great toe 15 days previous to adm.	Stiff jaw, cramps in extremities, esp. left leg in 3 days.	None.	Muscle spasm, became generalized then gradually improved in 2 wks.	Recovery.	Phenobarbital, 1½ gr. tid. Morphine, 1/6 gr. once. Parenteral feeding.	None.	
6 F	Splinter in r. knee 10 days previous to adm.	Difficulty in opening mouth and inability to flex knees for 2 days.	Generalized convulsions immediately after admission.	Aspiration pneumonia 2nd hosp. day.	Died 2nd hosp. day of resp. failure.	100,000 u. total ATS—I.V. 80 mgms avertin/kilo of body wt.	20,000 u ATS injected around crusted wound.	
7 F	Nail puncture of left foot 2 wks. previous to adm.	Stiff neck and jaw 1 day.	Clonic convulsions upon admission.	Apnea. Revived with artificial respiration.	Died 2nd hosp. day.	60 mgms. avertin/kilo body wt. 100,000 u. total ATS I.V.—I.M.	None.	
39 F	Therapeutic pneumothorax 1 week previous to adm.	Generalized spasm.	Clonic convulsions on 2nd hosp. day.		Died 4th hosp. day.	180,000 u. total ATS I.V.—I.M. Paraldehyde Sod. Amytol, Morphine.	None.	
15 M	Gastroenterostomy 6 days previous to adm.	Stiff neck and face.	Clonic convulsions following day.		Died 2nd hosp. day of resp. failure.	106,500 u. total ATS, I.V.—I.M. & Intrathecal. Paraldehyde, Avertin, Mag. Sulfate.	None.	
8 M	Nail puncture left foot 2 wks. prior to adm.	Pain and stiffness left leg and thigh.	Convulsions.	Pneumonia and left pleural effusion on 2nd hosp. day.	Died of resp. failure.	100,000 u. total ATS I.V.—I.M. 50 mgms. avertin/kilo body wt.	None.	
34 F	Criminal abortion 1 week prior to adm.	Generalized spasm.	Clonic convulsions on 2nd hosp. day.		Died 2nd day of resp. failure.	60,000 u. total ATS I.V.—I.M. Sod. Luminal Morphine Nembutal. Sod. Amytol, Mag. Sulfate.	None.	Diagnosis obscure for 1st 24 hrs. in hosp. and pt. was thought to be a hysteria problem until hist. of abortion was obtained.
3 M	Laceration of r. hand sutured 1 wk. prior to adm. No ATS.	?	8 Convulsions in 2 days prior to adm.		Died 3rd hosp. day of resp. failure.	100,000 u. total ATS I.V.—I.M. Tetanus toxoid 1 cc. on 3rd day. Ether Inhalation. Avertin.	None.	Diagnosis obscure for 1st 8 hours in hospital.
68 M	Suppurative lesions of right wrist.	Inability to swallow and generalized stiffness.	No convulsions.	Lobar pneumonia 4th hosp. day. Coma.	Died 5th hosp. day of resp. failure.	No ATS. Sodium luminal gr. 2 repeatedly.	None.	
61 M	Nail puncture in foot 11 days prior to hosp. adm.	Facial spasm for two days.	Generalized convulsions on 2nd hosp. day.		Died on 3rd hosp. day of resp. failure.	40,000 u. total ATS I.M. Luminal and Avertin.	None.	
45 M	Colles fract. with abrasion of skin & application of cast 1 wk. prior to adm.	Stiff jaw and dysphagia.	Convulsions on 2nd hosp. day.	Drowsy and finally coma.	Died 2nd hosp. day of resp. failure.	1,500 u. ATS at time of injury and repeated 5 days later. 60,000 ATS I.V. 1st hosp. day. Avertin.	Cast removed. Cruciate incision made. Saline sol. dressing	
62 M	Gangrene left toes (due to freezing) 2 wks. prior to adm.	Generalized rigidity 10 days prior to adm.	Clonic convulsions.		Died 2nd hosp. day.	120,000 u. ATS Total —I.V. Sod. Luminal.	Disarticulation of toe. Pot. permanganate packs.	
39 M	Healed laceration left hand.	Dysphagia and facial spasm 2 days prior to admission.	Clonic Convulsions.		Died 4th hosp. day.	140,000 u. total ATS intrathecal I.V. and I.M. routes. Avertin.	None.	



11 M	Splinter wound of right toe.	Generalized rigidity.	Convulsions.	Labored respirations.	Died 4th hosp. day of resp. failure despite ar- tific resp. 4 hrs.	80,000 u. total ATS intrathecally and I.V. 10 cc. 33% alcohol in 30% glucose q4h. Avertin. Sod. luminal.	Incision and drainage 3rd hosp. day. Hydrogen peroxide packs.	
12 M	Furuncle on jaw for 1 week.	Dysphagia and lockjaw.	Convulsions.	Labored respirations.	Died 4th hosp. day of resp. failure.	250,000 u. total ATS by I.V.-I.M. routes. Sodium luminal. Avertin. Mag. sulf.	None.	
12 M	Abrasion of knee from fire hydrant 5 days prior to admission.	Generalized spasm.	Convulsions.		Died 3rd hosp. day of resp. failure.	30,000 u. total ATS intrathecally I.V.-I.M. Avertin. Mag. Sulfate.	Hydrogen Peroxide Packs.	Spinal fluid clear on adm. and following administration of 5,000 u. ATS intrathec. sterile meningitis developed.
12 M	Extraction of tooth 1 month prior to admission.	Lockjaw and generalized rigidity 3 wks. prior to adm.	No Convulsions.	Marked generalized rigidity with gradual improvement.	Recovery with absence of rigidity on 13th hospital day.	70,000 u. total ATS by intrathecal, I.V.-I.M. routes.	None.	
54 M	Scalp laceration from fall 9 days prior to adm.	Stiff neck and face 3 days prior to adm.	Convulsions.	Respirations became labored.	Died 2nd hosp. day of resp. failure.	20,000 u. total ATS —I.M. Morphine Avertin.	None.	
14 M	Crushed finger in rollaway bed 1 week prior to adm.	Lockjaw 1 day.	Convulsions.	Respiration became labored 2 hours before death.	Died 2nd hosp. day of resp. failure.	80,000 u. tot. ATS by I.M.-I.V. and intrathecal routes. Nembutal & Avertin.	Incision of wound, phenol applied. Hydrogen peroxide packs.	
17 M	Rake puncture wound right lower leg 6 weeks prior to admission.	Stiff neck & jaw 1 day prior to adm.	No Convulsions.	Upper respiratory infection for 6 days prior to hospitalization. Temp 103°-105°	Died 7th hr. after adm. with high fever and gen. rigidity.	20,000 u. total ATS by I.V.-I.M. routes. Mag. sulfate.	None.	
40 F	Minor puncture wound right index finger from vacuum cleaner.	Stiff neck and face 5 days prior to adm.	Convulsions (5-6) 1 day prior to adm.	4th hosp. day—much improved.	Recovery. Home on 26th hosp. day.	250,000 u. total ATS I.V.-I.M. Mag. sulfate Avertin Sod. Amytol.	Saline pack.	
12 M	Minor finger injury from bicycle wheel chain 3 weeks prior to admission.	Stiff legs, neck and jaws, 3 days prior to admission.	No Convulsions.	Marked improvement at end of 4th hospital day.	Recovery. Home on 14th hosp. day.	130,000 u. total ATS I.V. Sod. luminal Morphine Mag. sulfate.	None.	
26 F	3rd molar tooth extracted 3 days prior to adm.	Stiff jaw, 2 days.	No Convulsions.	Continued generalized spasms for one week.	Recovery. Home on 18th hosp. day.	350,000 u. total ATS I.V.-I.M. routes. Avertin.	None.	
9 M	Splinter wound right thigh 5 days prior to admission.	Stiff jaw, neck, and extremities.	Convulsions on 2nd hospital day.		Died 3rd hosp. day in convulsions.	90,000 u. total ATS I.V. Paraldehyde Avertin.	Excision of splinter and wet packs app.	
48 M	Injection of left inguinal hernia 10 days prior to hospital admission.	Stiff neck, jaws, and back.	Convulsions	Seemed to improve then suddenly ceased breathing.	Died 2nd hosp. day of resp. failure.	280,000 u. tot. ATS I.M.-I.V. Avertin Pentothal Mag. Sulfate Curare Penicillin	Excision left inguinal wound. 10,000 u. ATS injected locally. Bichloride mercury packs.	
22 F	Criminal abortion 10 days prior to admission.	Stiff neck & jaw.	Convulsions		Died 3rd hosp. day of resp. failure.	120,000 u. tot. ATS by I.M.-I.V. & intrathecal routes. Mag. Sulfate Sod. Amytol Penicillin.	Culture douche.	

been clearly demonstrated,<sup>2</sup> however, that prolonged curarization, as is needed in tetanus convulsion control, has a lethal effect itself in spite of artificial maintenance of respiration. Animals so treated all revealed at death dilated hearts and congested livers and kidneys. This lethal effect of prolonged curarization may have been a direct effect of curare upon the heart musculature or its indirect effect through an influence on circulation. On the basis of this lethal effect in animals it should not be contemplated for prolonged use in the treatment of tetanus convulsions. Of all drugs available for this use, one stands out as practical. Paraldehyde has a wide range of safety since an overdose or prolonged use must be relatively great to create danger. Convulsions may be controlled adequately by its administration orally, rectally or intravenously.

Mention should perhaps be made here of the practice of administering phenol (intravenously or intrathecally) to patients with tetanus. Its use antedates the isolation of clostridium tetani. Gualdi and Baccelli used it on a patient with tetanus in 1888. The patient recovered and Baccelli became such a staunch advocate of its use that the Baccelli treatment has become a sporadically popular method.<sup>6</sup> Experimental evaluation of this method<sup>15</sup> recently has delegated it to the list of drugs to be mentioned only to be condemned.

(2) *Methods to combat toxin formation.*—Tetanus toxin is an exotoxin elaborated by the bacterial development from clostridium spores which remain localized to the wound of entry. This toxin spreads by tissue fluids and lymphatics into the adjacent tissues and ultimately via the circulation to all parts of the system. To combat continued production of toxin it is evident that whenever possible the local area of infection should be completely excised and, to discourage further growth of the anaerobic organisms which may remain, oxidizing substances such as hydrogen peroxide or potassium permanganate packs should be applied. To neutralize toxin which already has saturated the adjacent area 20,000 units of antitoxin customarily has been injected by some workers through the soft tissues surrounding the wound. This seems to be a worthwhile and reasonable procedure.

In such instances as those of this series, in which the portal of entry was the site of an extracted tooth, a pneumothorax puncture or a gastro-enterostomy, local excision of the wound obviously is not feasible. There are others, however, in which note was made of apparent healing of the wound and accordingly it was not disturbed. It should be recalled that since the offending organism is an anaerobe it finds its most fertile field for growth in a wound whose surface is closed. Routinely, where possible, such wounds should be excised immediately in an effort to remove the culture growth. Patients in whom the portal of entry has been the uterus (criminal abortion) should immediately be subjected to mechanical removal of uterine debris and intrauterine douche with 50 cc. of 0.1 N

sulfuric acid in 2 liters of 1:1000 potassium permanganate solution according to the method described by Brown.<sup>25</sup>

(3) *Methods to neutralize toxin already formed and disseminated.*—The clinician has no possible means of estimating how much toxin has already been absorbed and fixed by the central nervous system. Evidence is clear (experimentally) that once the lethal dose has been fixed, death inevitably will ensue. If between one half and full lethal dose is administered to an animal, severe convulsions will result but the animal will recover.<sup>21</sup> The clinician must then proceed on the assumption and the hope that his patient has not already fixed a lethal dose of toxin. His first step then should be to neutralize all circulating toxin in the body. How much antitoxin is required to do this? One finds doses from 20,000 to hundreds of thousands of units being used. In those who have a chance for recovery 50,000 units of antitoxin intravenously as an initial dose is sufficient to neutralize all of the toxin still free.<sup>12</sup> The overenthusiastic administration of larger doses is not warranted for, as pointed out by Tiron,<sup>7</sup> it has been shown experimentally that if a full lethal dose has been fixed by the central nervous system a million neutralizing doses will not save the animal. Single intravenous or intramuscular doses of from 30,000 to 60,000 units of antitoxin serum last at progressively lower levels for six weeks,<sup>11</sup> so, the additional injection of 5,000 units daily to insure neutralization of any further toxin absorbed should offer optimum safety.

Should antitoxin be administered intrathecally? One finds staunch supporters for administration by this route.<sup>7, 10, 23</sup> There have been reports of deaths following intrathecal administration<sup>24</sup> and in one case death occurred almost immediately following this procedure.

This method of treatment undoubtedly was instigated on the basis of the striking central nervous system manifestations of the disease and was further encouraged by Meyers nerve carriage theory which contended that the toxin reached the central nervous system via the peripheral nerves. This latter theory was disproved adequately by the work of Elman<sup>26</sup> who demonstrated an absence of anatomic communication between the perineural and endoneural lymphatics and the spinal fluid space. It is now known that the toxin reaches the spinal fluid and the central nervous system directly by the circulation. Antitetanic serum reaches the spinal fluid and central nervous system in a similar manner. From the evidence at hand, it appears that the serum administered intravenously is adequate. As pointed out by Vener and Bower<sup>10</sup> there seems to be good empirical indication for administering methenamine to encourage the ready transport of antitoxin through the blood-brain barrier. These men have used methenamine successfully by giving gr. XV two hours after the first intravenous dose of antitoxin and from ten to twelve hours after each intramuscular dose.

(4) *Methods to prevent and combat common*



complications.—The more common complications and those which should be anticipated in tetanus patients are: (a) respiratory infections, (b) trauma resulting from injuries sustained during convulsions, and (c) laryngeal obstruction.

(a) Respiratory infections result from persistent spasm of muscles of respiration which inhibits physiologic pneumatic aeration and discharge of secretions. The resultant accumulation and stagnation of material in the respiratory tree lays the ground work for atelectasis and pneumonitis. Death from bronchopneumonia and even lobar pneumonia (as illustrated in one case) occurs. To prevent this exigency, carbon dioxide-oxygen mixture should be administered periodically and an oxygen concentration of 10 per cent in inhaled air should be provided constantly. The latter is chiefly for the purpose of assuring minimal cardiac and pulmonary embarrassment. Since respiratory infection is such a dreaded complication, penicillin should be administered routinely as a precautionary measure. There are reports on cases of tetanus in which it appears penicillin had a beneficent influence.<sup>4</sup>

(b) Trauma resulting from injuries sustained during convulsions frequently has been observed. Instances of compression fracture of vertebrae testify to the magnitude of injury which severe convulsions of this nature may produce. Patients may fall out of bed during such seizures. The control of convulsions by paraldehyde will obviate most of these injuries and, as an added protection, all patients should be kept in beds protected with side canvasses or nets.

(c) Incipient laryngeal obstruction usually is manifested by stridor and a tracheotomy set always should be readily available at the patient's bedside so that if tracheotomy should become indicated, it may be performed without delay.

#### PREVENTION OF TETANUS INFECTIONS

It is obvious that for any patient who presents even early signs or symptoms of tetanus infection, odds are great that he will die. A program for management can be undertaken which will give him the greatest possible chance for recovery and, when meticulously carried out, mortality may be lessened. It is not possible to determine from symptoms and signs which patients are likely to die and which may recover so that in each instance the clinician must carry his fight to the end. And in the end he must expect at best that most of his patients cannot recover. It is in this realization that one must admit continued defeat or else seek improved means for prevention of the disease.

Can tetanus be prevented? The administration of antitetanic serum to the wounded has been of some merit but has failed in hundreds of instances because: (1) The indication for its administration was not recognized by the clinician, (2) the patient did not consult a physician at the time of injury, (3) an adequate amount of antitetanic serum was not given, or (4) delayed tetanus resulted from trauma to a previously injured part. Although

treated originally with antitetanic serum, tetanus spores may remain in a dormant state.

Can all of these pitfalls in prevention be eliminated? The answer to this question began with the work of Ramon at the Pasteur Institute on tetanus toxoid and subsequently has been elaborated to a positive affirmative by results obtained in the French, British and American armies.

In World War II French soldiers were immunized with tetanus toxoid and only one soldier is known to have developed tetanus. His case was mild and he recovered. In the campaign of Flanders there were eight cases of tetanus and these developed in the ranks of a group of 1,800 wounded who had elected to omit injections with toxoid. Among 16,000 who were similarly wounded but previously immunized not a single case of tetanus resulted. The U. S. Navy<sup>14</sup> has worked with toxoid immunization since 1934 and has not as yet reported tetanus in any individual who has been immunized.

One is presented then with a malady which can be eradicated perhaps totally by immunization methods and which otherwise will continue to claim the lives of from 50 per cent to 80 per cent of all whom it affects. The challenge is clear and the response should be as direct.

Active immunization studies of Ramon,<sup>8</sup> Yeazell and Deamer,<sup>1</sup> Peshkin,<sup>5</sup> Lapin,<sup>9</sup> Gold,<sup>13</sup> Hall,<sup>14</sup> Miller, Humber and Dowrie,<sup>16</sup> Stewart,<sup>15</sup> Cooke and Jones<sup>27</sup> and others may be summarized as testifying to the following:

1. Adequate immunization to tetanus may be obtained in humans by two injections of toxoid.
2. The longer the interval between the injections the better the response of antitoxin.
3. The antigenic property of tetanus toxoid is enhanced by combining it with other toxoids such as perfringens, typhoid, paratyphoids and pertussis.
4. The alum precipitated toxoid is better than the plain toxoid and the aluminum hydroxide adsorbed is superior to either.

5. A booster dose of toxoid at the time of injury to an immunized individual should be administered to cause higher elevation of the antitoxin titer.

Reactions to toxoid immunizations are now less than one in ten thousand since Witte and Berma peptones have been omitted in its preparation.<sup>17</sup> Since universal immunization is necessary to eradicate tetanus infection completely it becomes a concern of every physician and of public health administrators. Since many clinic and hospital patients cannot be depended upon to return for their second toxoid injection, there is a need for a public health project which will embrace all.

In the meantime, industrial concerns, school and public health clinics who have medical supervisors available should incorporate tetanus toxoid immunization as a routine measure. Any member of such an organization should then be given a booster dose of toxoid upon being injured. Private practitioners also should attempt to blanket their clientele with the basic tetanus toxoid injections.

Practically all children at some time or other

now receive diphtheria toxoid. There is available a combined diphtheria tetanus toxoid which could just as simply be administered and which if routinely given would mean that ultimately practically the entire population would have a basic immunization with tetanus toxoid.

Because of (1) the high mortality rate, (2) the use of drugs known to be detrimental in controlling convulsions over a long period of time and (3) the apparent indecision as to the necessary amount of antitetanic serum indicated, the following outlines have been established as guides for management and for prevention of tetanus at City Hospital.

#### OUTLINE FOR MANAGEMENT OF TETANUS PATIENTS

1. Combat toxin present.
  - a. 50,000 units antitetanus serum intravenously stat and 20,000 units intravenously or intramuscularly each succeeding day.
  - b. Methenamine gr. XV intravenously two hours after intravenous dose and from ten to twelve hours after intramuscular dose.
2. Combat toxin production.
  - a. Immediate excision of local lesions where possible.
  - b. Culture douche for infected abortions.
  - c. KMNO<sub>4</sub> packs to wound. Infiltration with 10,000 units antitetanus serum through tissues adjacent to wound at time of excision.
3. Combat convulsions.
  - a. From 20 to 40 cc. paraldehyde, orally or rectally pro re nata.
  - b. Intravenous administration when necessary.
4. Combat and prevent complications.
  - a. Protect patient with side canvas or net.
  - b. Administer penicillin.
  - c. Give CO<sub>2</sub>-O<sub>2</sub> mixture for one minute every two hours.
  - d. Continuous O<sub>2</sub>.
  - e. Observe closely for stridor and keep tracheotomy set at the bedside for use if needed.

Do not give antitetanus serum intrathecally.  
Do not ignore "healed" or "nearly healed" lesions.  
Do not use barbiturates, ether, curare or phenol.

#### GUIDE FOR PROPHYLACTIC TREATMENT OF TETANUS

1. Administer 1 cc. of tetanus toxoid\* subcutaneously.
2. Follow in from two to three months with a second injection of the same.
3. Administer 1 cc. of tetanus toxoid at such times that an individual thus basically immunized sustains an injury which breaks continuity in skin or mucous membrane.
4. If there is doubt as to whether basic immunization has been performed, administer 1 cc. tetanus toxoid and antitetanic serum.

#### SUMMARY

1. A résumé of the history of tetanus has been given.
2. A review of tetanus cases seen at St. Louis

\* The toxoid used in children may be combined with pertussis or diphtheria toxoid. Alum precipitated or aluminum adsorbed toxoids are preferable.

City Hospital during the last decade has been made.

3. It has been demonstrated that fatal tetanus infections may result from what may appear to be insignificant breaks in the mucous membrane and integuments of the body.

4. It has been shown that tetanus infection continues to bear an extremely high mortality rate while it appears that improved treatment methods have not been generally adopted.

5. The failures of antitetanic serum as an adequate prophylactic agent have been enumerated.

6. Pitfalls and errors in therapy have been discussed.

7. Advances in prevention of the disease by active immunization with tetanus toxoid have been cited to indicate the immediate need for a universal program of preventive attack which places particular responsibility squarely upon pediatricians, health administrators, school and industrial physicians.

8. An outline for rational management of tetanus infection has been presented.

9. A guide for prophylactic therapy has been planned.

1515 Lafayette St.

#### BIBLIOGRAPHY

1. Yeazell, Louis A., and Deamer, Wm. C.: Response to a Stimulating Injection of Tetanus Toxoid, *Am. J. Dis. Child.* **66**:132-142, 1943.
2. Perlstein, M. A., and Weinglass, A.: Fatal Effects of Prolonged Complete Curarization, *Am. J. Dis. Child.* **67**:360-364, 1944.
3. McDonnell, J. F.; Wallace, D. A., and Andes, J. E.: Nail Puncture Wounds, *J.A.M.A.* **123**:894-895, 1943.
4. Bexton, Russell, and Kurman, Rachelle: Tetanus; A Report of Two Cases Treated With Penicillin, *J.A.M.A.* **127**:26, 1946.
5. Peshkin, M. M.: Immunity to Tetanus Induced by a Third Dose of Toxoid Four Years After Basic Immunization, *Am. J. Dis. Child.* **69**:83-88, 1945.
6. Francisco, Roberto: A Clinical and Epidemiological Study of Tetanus in Puerto Rico, *Clinics* **3**:373-414, 1944.
7. Firor, W. M.: The Treatment and Prevention of Tetanus, *Internat. Abst. Surg.* **75**:185-190, 1942.
8. Ramon, Gaston: Combined (Active-Passive\* Prophylaxis and Treatment of Diphtheria on Tetanus, *J.A.M.A.* **114**:2366-2368, 1940.
9. Lapin, J. H.: Combined Immunization of Infants Against Diphtheria, Tetanus and Whooping Cough, *Am. J. Dis. Child.* **63**:225-237, 1943.
10. Vener, H. G., and Bower, A. G.: Clinical Tetanus, *J.A.M.A.* **116**:1627-1631, 1941.
11. Spaeth, Ralph: A Clinical Study of Tetanus, *Am. J. Dis. Child.* **60**:130-169, 1940.
12. Spaeth, Ralph: Serum Therapy of Tetanus, *Am. J. Dis. Child.* **61**:1146-1174, 1941.
13. Gold, Herman: Active Immunization Against Tetanus, *Ann. Surg.* **114**:1060-1067, 1941.
14. Hall, W. W.: Tetanus Toxoid Immunization in the United States Navy, *Ann. Int. Med.* **14**:565-582, 1940.
15. Thompson, W. D., and Friedman, Fern: The Efficacy of Phenol and Tetanus Antitoxin in the Treatment of Experimental Tetanus, *Surg., Gynec. & Obst.* **72**:860-871, 1941.
16. Miller, Humber and Dowrie: Immunization with Combined Diphtheria and Tetanus Toxoids (Aluminum Hydroxide Adsorbed) Containing Hemophilus Pertussis Vaccine, *J. Pediat.* **24**:281-289, 1944.
17. Tetanus Toxoid; Its Use in the United States Army, *Am. J. Pub. Health* **33**:53-57, 1943.
18. Stewart, Sarah E.: Active Immunization of Human Beings With Combined Clostridium Perfringens and Tetanus Toxoids, *War Med.* **3**:508-511, 1943.
19. Castiglioni, A.: History of Medicine, New York, Alfred A. Knopf, 1941.
20. Abel, J. J.; Hampil, B.; Jonas, A. F., Jr., and Chalian, W.: Bull. Johns Hopkins Hosp. **62**:522, 1938.
21. Harvey, A. M.: *J. Physiol.* **96**:348, 1939.
22. Firor, W. M.; Lamont, A., and Shumacker, H. B., Jr.: *Ann. Surg.* **3**:246, 1940.
23. Vener, H. L.: California and West. Med. **48**:193, 1938.
24. Dietrich, H. F.: *Am. J. Dis. Child.* **59**:693, 1940.
25. Brown, T. K.: The Treatment of Puerperal Infection, *Wisconsin M. J. (October)* 1942.
26. Elman, Ribert: Bull. Johns Hopkins Hosp. **34**:99 (March) 1923.
27. Cooke, Jean V., and Jones, F. G.: The Duration of Passive Tetanus Immunity, *J.A.M.A.* **121**:1201-1209, 1943.



## "Severe intractable asthma

requires more strenuous measures. . . . Aminophyllin in doses of 0.25 Gm. dissolved in 10 cc. of water is often very effective when injected intravenously."<sup>1</sup>

To relax spasm, relieve congestion and restore deep, regular breathing,

# SEARLE AMINOPHYLLIN\*

has proved a valuable drug—generally effective even in epinephrine-refractory cases.

Searle Aminophyllin is indicated in paroxysmal dyspnea, bronchial asthma, Cheyne-Stokes respiration and selected cardiac cases.

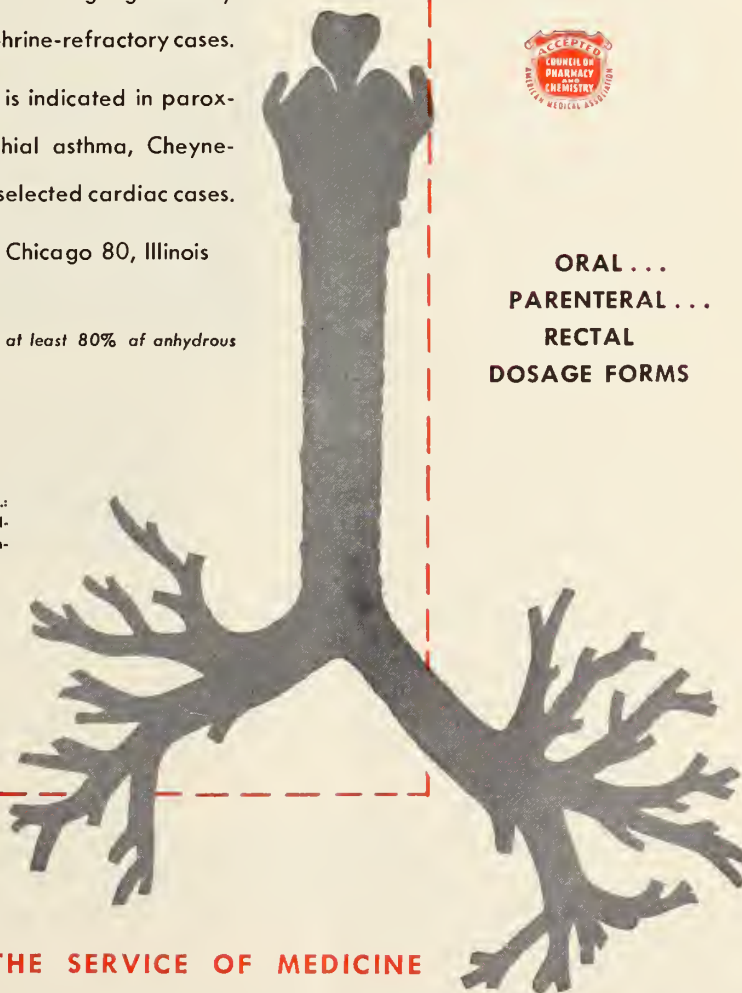
G. D. Searle & Co., Chicago 80, Illinois

\*Searle Aminophyllin contains at least 80% of anhydrous theophylline.

<sup>1</sup> Rackemann, F. M., in Cecil, R. L.: Textbook of Medicine, ed. 7, Philadelphia, W. B. Saunders Company, 1948, p. 539.



ORAL . . .  
PARENTERAL . . .  
RECTAL  
DOSAGE FORMS



## SEARLE

RESEARCH IN THE SERVICE OF MEDICINE

**CAMP**

## for POSTOPERATIVE and POSTPARTUM NEEDS

Basic design and the unique system of adjustment make a large variety of Camp Scientific Supports especially useful as postoperative aids. Surgeons and physicians often prescribe them as assurance garments and consider them essential after operation upon obese persons, after repair of large herniae, or when wounds are draining or suppurating. A Camp Scientific Support is especially useful in the postoperative patient with undue relaxation of the abdominal wall. Obstetricians have long prescribed Camp Postoperative Supports for postpartum use. Physicians and surgeons may rely on the Camp-trained fitter for precise execution of all instructions.

If you do not have a copy of the Camp "Reference Book for Physicians and Surgeons", it will be sent on request.



THIS EMBLEM is displayed only by reliable merchants in your community. Camp Scientific Supports are never sold by door-to-door canvassers. Prices are based on intrinsic value. Regular technical and ethical training of Camp fitters insures precise and conscientious attention to your recommendations.

**S. H. CAMP AND COMPANY, JACKSON, MICHIGAN**

*World's Largest Manufacturers of Scientific Supports*

Offices in New York • Chicago • Windsor, Ontario • London, England



# SODIUM PREGNANDIOL GLUCURONIDATE DETERMINATIONS IN THE DIAGNOSIS OF PREGNANCY

M. YANOW, M.D., *St. Louis*

AND

S. D. SOULE, M.D., *St. Louis*

IN A PREVIOUS ARTICLE we reported on the value of urinary sodium pregnandiol glucuronide (NaPG) determinations as measured by the Guterman (1945) technic in the diagnosis of pregnancy. Although Guterman's method is serviceable for the clinical diagnosis of pregnancy, it had become evident to us, as well as to other workers, that the final extracts of urine obtained by this method are contaminated with substances which give a color reaction similar to that of NaPG.

Studies were undertaken to modify the procedure so as to remove as much as possible of the offending chromogenic material without significantly complicating the procedure or impairing the recovery of urinary NaPG. We endeavored to improve the technic, yet keep it simple enough to serve both as a routine diagnostic test for pregnancy and as a tool for other studies of progesterone metabolism. It was found that most of the non-pregnandiol chromogenic end product could be removed by the addition of one step to Guterman's technic, i. e., the washing of the final precipitate with petroleum ether. The experimental work with the technic is published elsewhere.

Using the original Guterman technic, except for the analysis of twelve hour summaries rather than single voided specimens, it was found that a urinary NaPG excretion of 3.0 mg. or more per twelve hours, in a regularly menstruating woman who had missed an expected menses, indicated a pregnancy in 96.5 per cent of eighty-six consecutive cases. The present study represents the application of the modified Guterman technic in a second series of eighty-two consecutive patients who had missed an expected menses, and in whom no symptoms (bleeding) of threatened miscarriage had occurred.

## METHOD

**Collection.**—Urine specimens were collected as follow: The patient voided at some convenient time, e. g., 8:00 p. m., and discarded the specimen. From then on all urine voided was saved and collected in a single jar. Twelve hours later (8:00 a. m.) the patient again voided and added the specimen to the total. The entire specimen was then brought to the laboratory, usually that same morning. The patients were instructed to keep the urine in a cool place during the period of collection, without any preservative or use of refrigeration. This overnight collection period was selected because it involved the least inconvenience to the patient.

From the Department of Obstetrics and Gynecology and the Laboratories of the Jewish Hospital, St. Louis.  
Aided by the Francis Israel Fund of the Noshim Rachmomieth Society of St. Louis.

**Technic.**—Analysis was performed on the same day or the morning following the collection of the urine. The volume was measured and the pregnandiol content was determined in a 100 cc. aliquot. From this determination the amount of pregnandiol excreted per twelve hours was calculated.

## A. Hydrolysis and Extraction of Pregnan- diol

1. One hundred ml. urine, 50 ml. toluene, 10 ml. concentrated hydrochloric acid, and two glass beads are introduced into a 500 ml. flat bottomed Florence flask.

2. The mixture is boiled vigorously over an electric hot plate for fifteen minutes, with a 400 to 500

Table 1.

Pregnan- diol Mg. Per 12 Hours	Number of Cases Pregnant	Number of Cases Delayed Menses
0-0.9	0	0
0.1-0.19	0	1
0.2-0.29	0	0
0.3-0.39	0	3
0.4-0.49	1 (271B)	2
0.5-0.59	0	2
0.6-0.69	1 (268)	6
0.7-0.79	0	1
0.8-0.89	1 (312)	1
0.9-0.99	0	3
1.0-1.09	0	1 (100B)
1.1-1.19	1 (251)	1 (141A)
1.2-1.29	2	0
1.3-1.39	3	1 (150)
1.4-1.49	1	0
1.5-1.99	10	0
2.0-2.49	8	2 (125A) (125B)
2.5-2.99	4	0
3.0-3.99	8	0
4.0-4.99	7	1 (273)
5.0-	10	0
Total	57	25

mm. long reflux condenser inserted through one hole cork stoppers.

3. The flask and its contents are brought to room temperature by cooling under the water tap.

4. The mixture is transferred to a 500 ml. separatory funnel and the lower layer (urine) is drawn off.

5. The toluene layer and emulsion are washed twice with 15 ml. portions of 0.1N sodium hydroxide and then twice with 15 ml. portions of distilled water.

## B. Precipitation of Impurities

1. The washed toluene and emulsion (A-5) are transferred to a 125 ml. Erlenmeyer flask with two glass beads.

2. The mixture is boiled over an electric hot plate (under a hood).

3. When the water has evaporated and the toluene mixture is boiling smoothly, 10 ml. of 2 per cent sodium hydroxide in absolute methanol are added.

4. The mixture is evaporated to approximately

one half of the original toluene volume and the appearance of a granular precipitate.

5. The toluene mixture is then filtered, while hot, through a fritted glass filter (medium porosity, Pyrex) with mild suction. If the filtrate has an orange, pink or brown tinge, steps B-3, B-4, B-5 must be repeated until the filtrate is yellow or yellow green.

6. The precipitate (B-5) is washed with 15 ml. hot toluene.

7. The combined filtrates (B-5 and B-6) are then evaporated to dryness over the hot plate (in the

Table 2.

Answer	Correct	False	Per Cent Correct
Positive	53	2	96.4
Negative	19	3	86.4
Total	72	5	92.2

hood), a gentle air stream being used to drive off the last traces of toluene. This prevents charring of the residue.

#### C. Precipitation of Pregnandiol

1. The residue (B-7) is warmed, with the addition of 5 ml. acetone over a hot plate until it goes completely in solution.

2. Twenty ml. 0.1N sodium hydroxide are added slowly and the mixture is boiled for three minutes on the hot plate.

3. The flask is then placed in a refrigerator (5 C.) for one hour.

#### D. Isolation of Pregnandiol

1. The mixture (C-3) is filtered through a fritted glass filter (medium porosity, Pyrex) with mild suction.

2. The precipitate (D-1) is washed with 15 ml. distilled water, and then with 10 ml. petroleum ether.

3. The receiving flask is changed and 10 ml. hot absolute alcohol are passed through the fritted glass filter to dissolve the precipitate.

4. The alcohol filtrate (D-3) is evaporated to dryness in the receiving flask over an electric hot plate (in the hood).

#### E. Color Development and Quantitative Measurement

1. Ten ml. concentrated sulphuric acid are added to the residue (B-4).

2. Color is allowed to develop for one hour.

3. Aliquots of the solution E-2 are diluted up to a final volume of 5 ml. with concentrated sulphuric acid in a dry cuvette and the solution thoroughly mixed.

4. The color is read in a Coleman Universal Spectrophotometer No. 11.

5. The amount of pregnandiol represented by the absorption reading is obtained from the standardization curve.\* Calculations for the dilutions involved are made to obtain the amount of pregnandiol present in the original sample.

\*Standardization curve prepared from Pregnandiol supplied by Ayerst, McKenna and Harrison, Ltd.

## RESULTS

The findings in the eighty-two cases are tabulated in table 1 according to whether they were subsequently proven pregnant or nonpregnant.

### DISCUSSION OF IRREGULAR CASES

#### A. Pregnant

Case 1. 271B. Last menstrual period August 10, 1948; pregnandiol determination September 13, 1948; patient aborted September 23, 1948.

Case 2. 312. Diabetic patient, gravida 4, tripara, last menstrual period June 12, 1948; pregnandiol determination August 6 and 7; placed on prophylactic diethylstilbesterol according to routine of Smith and Smith; carried.

Case 3. 251. Induced abortion; diagnosis never established.

#### B. Nonpregnant

Case 1. 100B. Irregular cycles of thirty to ninety days; last menstrual period February 29, 1948; pregnandiol determination May 11 and 12; menses May 14, 1948.

Case 2. 141A. Irregular cycles; last menstrual period December 7, 1947; pregnandiol determination January 25 and 26, 1948; menses January 29, 1949.

Case 3. 125B. Irregular cycles; last menstrual period May 16, 1948; pregnandiol determination June 21 and 22, 2.16 mg. per twelve hours; June 25 and 26, 2.20 mg. per twelve hours; June 29 and 30, 0.51 per twelve hours; menses July 2, 1948.

Case 4. 273. Irregular cycles; aged 45; last menstrual period April 3, 1948; pregnandiol determination June 11 and 12; menses June 17, 1948.

Omitting case 251 (unproven) and cases 100B 141A, 125B and 273 (irregular cycles) from the compilations, it is noted that fifty-three of the fifty-six cases of pregnancy gave values above 1.25 mg. pregnandiol excreted per twelve hours, whereas nineteen of the twenty-one cases of delayed menses gave values of less than 1.00 mg. per twelve hours. It thus could be postulated that in regularly menstruating women who have missed an expected menstrual period, a pregnandiol excretion (as determined by the method described) of 2.5 mg. or more per twenty-four hours indicates pregnancy. Using this critical level of 2.5 in the present series an accuracy of 92.2 per cent is obtained (see table 2).

*False Results.*—Of the three false "negative" results, no explanation is offered for one (268). The second (271B) aborted ten days following the determination and hence was not a truly false negative. The third (312) had diabetes and was placed on prophylactic therapy after the discovery of a "negative" pregnandiol value at the eighth week of amenorrhea and may have been prevented from aborting. The 94.6 per cent correct answers in pregnancy is not corrected for any of these cases. For the two false "positive" results no explanation is offered other than that they may represent in-



Having a wonderful vacation



- |  |   |
|--|---|
| <input checked="" type="checkbox"/> my hay fever is better | <input type="checkbox"/> deep sea fishing   |
| <input checked="" type="checkbox"/> dancing                | <input type="checkbox"/> aquaplaning        |
| <input checked="" type="checkbox"/> yachting               | <input checked="" type="checkbox"/> golfing |
| <input checked="" type="checkbox"/> flirting               | <input type="checkbox"/> surf fishing       |
| <input checked="" type="checkbox"/> swimming               |   |

Mr. R. J. Campbell  
Lindsey Lane  
Meadowbrook,  
Pennsylvania

Wherever your pollen-sensitive patient spends his vacation, TRIMETON\* may add to his enjoyment and rest by alleviating his symptoms of pollinosis. TRIMETON is an unusual antihistaminic. Essentially different in chemical composition, it is so potent that only one 25 milligram tablet is usually required to attain the desired relief in fifteen to thirty minutes. Best of all, your patient isn't likely to sleep away his vacation because the small milligram dosage lessens side effects. Your patient will also appreciate that the high potency of TRIMETON also means lower cost of therapy.

# Trimeton

**Dosage:** One 25 mg. tablet one to three times daily.

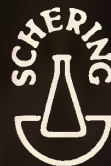
TRIMETON, brand of propenpyridamine, 25 mg. tablets, scored, are available in bottles of 100 and 1000.

\*TRIMETON trade-mark of Schering Corporation

Schering

CORPORATION • BLOOMFIELD, NEW JERSEY  
IN CANADA, SCHERING CORPORATION LIMITED, MONTREAL

# TRIMETON



stances of delayed ovulation or corpus luteum persistence.

**Irregular Cycles.**—In women with irregular menstrual cycles it is obvious that a pregnandiol determination could easily fall within the postovulatory phase of the menstrual cycle and thus give

Table 3.			
Clinical State	Correct	False	Per Cent Correct
Pregnancy	53	3	94.6
Delayed menses	19	2	90.5

false "positive" results if not properly interpreted. Hence, a single pregnandiol determination in these women is not decisive. An analysis of the four cases of irregular cycles, inadvertently admitted to this series, is interesting. Case 100B menstruated two days after the false "positive" result; case 141A, three days later; case 125B, ten days and six days;

case 273, five days following the test. In other words, all cases menstruated within the fourteen days customarily ascribed to the life of the corpus luteum spurium.

#### SUMMARY

1. A modified procedure for the determination of urinary sodium pregnandiol glucuronide is presented.

2. Using the procedure it was found that an excretion of NaPG of 2.5 mg. or more per twenty-four hours in regularly menstruating women, who had missed an expected menses, indicated pregnancy in 92.2 per cent of the cases.

Jewish Hospital.  
4500 Olive St.

#### BIBLIOGRAPHY

1. Guterman, H. S.: J. Clin. Endocrinol. 5:407, 1945.
2. Soule, S. D., and M. Yanow: Am. J. Obst. & Gynec. 57: 748, 1949.

### TREATMENT NOW AVAILABLE AIDS MANY ARTHRITIS VICTIMS

Sufferers from arthritis who will have to forego treatment by the recently announced drugs, Compound E and ACTH, until these products are obtainable in larger quantities and at lower prices still have available to them other effective means of therapy.

"There can be no doubt that remedies have been evolved through years of patient clinical observation which suffice for many cases," Dr. Edward F. Rosenberg of Chicago writes in the July 2 issue of *The Journal of the American Medical Association*.

"The best end results obtained are not from the application of any single measure, but from continuing intelligent application of a program of measures directed against the many abnormalities produced by rheumatoid arthritis.

"The outlook is not dark for every person with rheumatoid arthritis. In fact, the outcome is satisfactory in a majority of cases. A physician who undertakes the treatment of patients with rheumatoid arthritis should approach this problem with a spirit of encouragement and with a reasonable degree of optimism."

He points out that in addition to "common sense" measures, certain additional forms of therapy for rheumatoid arthritis require consideration. Among these, gold therapy is perhaps the most important at the moment, he says.

"Pain and stiffness resulting from osteoarthritis have been observed to disappear during jaundice, and it is therefore to be hoped that progress in the application of the jaundice phenomenon to arthritis may bring relief also to sufferers from osteoarthritis," Dr. Rosenberg also says.

Dr. Rosenberg's article was prepared before the recent announcement of Compound E and ACTH and does not mention these two products. In his review of other forms of treatment he stresses the importance of the family physician.

Dr. Philip S. Hench and associates of the Mayo Clinic, Rochester, Minn., in a preliminary report recently said that certain clinical and biochemical features of rheumatoid arthritis have been markedly improved by the daily intramuscular injection of the hormones, Compound E or ACTH. So far, both products are obtainable only in small quantities.

### TREAT PSORIASIS WITH UNDECYLENIC ACID

Of forty-one patients with psoriasis, twenty-seven showed improvement after treatment with undecylenic acid, report two New York doctors.

Writing in the July 9 *Journal of the American Medical Association*, Drs. H. Harris Perlman and Irving L. Milberg of the Department of Dermatology and Syphilology, Post Graduate Medical School, New York University-Bellevue Medical Center, say:

"It appears possible that the administration of

undecylenic acid had favorable influence on the course of psoriasis in the improved group observed. Much further investigation will be needed before definite conclusions can be drawn."

Twelve patients were classified by the doctors as "unequivocally improved," and fifteen as "somewhat improved." Ten patients showed no change in symptoms from treatment with the drug, and three had distinct aggravation of the disease. Seven of eight patients with psoriatic joint disease noted relief from pain.



# *Facts About Conception Control*

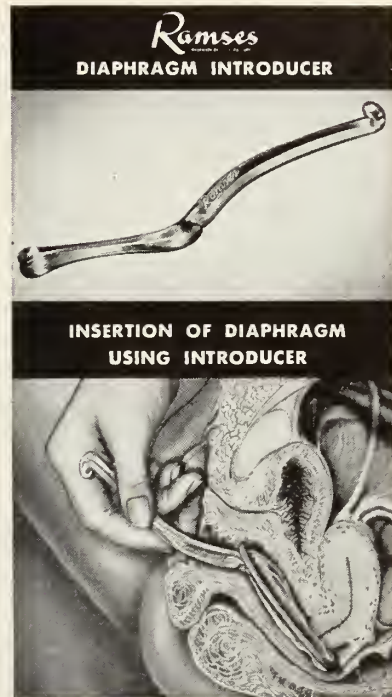
## THE USE OF THE DIAPHRAGM INTRODUCER

Use of a diaphragm introducer is favored by many patients who find manual manipulation objectionable or difficult. It facilitates the insertion and correct placement of the diaphragm, as well as its removal.

The "RAMSES"® Diaphragm Introducer provides the following features:

- Simplicity and convenience in use
- Safety — design minimizes possibility of injury to the cervix or accidental insertion into the urethra
- Smooth surface lessens bacterial proliferation — makes for easy cleaning
- Ease of removal assured by bluntly hooked end

The "RAMSES" Diaphragm Introducer is supplied in the Physician's Prescription Packet No. 501, without charge



**Ramses**  
TRADEMARK REG. U.S. PAT. OFF.

### PHYSICIAN'S PRESCRIPTION PACKET NO. 501

A complete unit for conception control. Contains (1) a "RAMSES" Flexible Cushioned Diaphragm of the prescribed size, (2) a "RAMSES" Diaphragm Introducer of corresponding size, and (3) a tube of "RAMSES" Vaginal Jelly† (regular size).

\* The word "RAMSES" is a registered trademark of Julius Schmid, Inc.

† Active Ingredients: Dodecaethyleneglycol Monolaurate 5%; Boric Acid 1%; Alcohol 5%.



***gynecological division***

***Julius Schmid, Inc.***

**423 West 55th Street, New York 19, N. Y.**

**quality first since 1883**

"RAMSES" Vaginal Jelly is accepted by the Council on Pharmacy and Chemistry of the American Medical Association. The "RAMSES" Diaphragm and Diaphragm Introducer are accepted by the Council on Physical Medicine of the American Medical Association.

## PRESIDENT'S PAGE

Passage of House Resolution 2893, now pending in Congress, would bring the self employed into the Social Security taxing system. It calls for an initial tax of  $2\frac{1}{4}$  per cent of income up to \$4,800 for old age insurance benefits alone.



If one earns \$4,800 or more annually, the tax this year alone would be \$108 in addition to income taxes.

It would be almost impossible for self-employed persons to derive any benefit from old age assistance insurance. The self-employed are doctors, lawyers, farmers and small business men, all of whom are now excluded from old age assistance taxes. Under the terms of the law, one would have to give up his profession and retire at age 65 in order to qualify for benefits. The benefits are small, the maximum being \$85 per month and that only for those who pay taxes from a young age continuously until age 65. Under the present law, if one earned as little as \$15 per month at age 65, he would not be eligible for old age insurance benefits, even though one

might have paid several thousands of dollars into the fund.

The House of Delegates of the American Medical Association adopted a resolution at its Atlantic City session expressing its opposition to the extension of so-called "Social Security" to self-employed individuals, including physicians.

Members are urged to inform their Congressmen of the attitude of the medical profession regarding House Resolution 2893.

*Wallis Smith.*



# THE JOURNAL

of the

Missouri State Medical Association

623 Missouri Bldg. Telephone: Newstead 0404-05

Subscription . . . \$3.00 a year in advance

*Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent.*

AUGUST, 1949

## EDITORIALS

### CENTENNIAL OF THE ASSOCIATION

The centennial anniversary of the Missouri State Medical Association will be commemorated at the Ninety-second Annual Session to be held in St. Louis, March 26 to 29, 1950. Sessions were not held during the Civil War and one session was omitted during World War II, thus the discrepancy in the years of the existence of the Association and the number of annual sessions.

To accomplish plans to make the anniversary session an outstanding one, a larger General Committee on Arrangements was appointed by the Council consisting of J. W. Thompson, M.D., St. Louis, Chairman; Otto W. Koch, M.D., Clayton; W. F. Francka, M.D., Hannibal; Frank W. Hall, M.D., Cape Girardeau; Wallis Smith, M.D., Springfield; W. A. Bloom, M.D., Fayette; H. E. Petersen, M.D., St. Joseph; Ralph E. Duncan, M.D., Kansas City; F. T. H'Doubler, M.D., Springfield; R. E. Schlueter, M.D., St. Louis; D. L. Sexton, M.D., St. Louis; John F. Patton, M.D., St. Louis; R. O. Muether, M.D., St. Louis. This committee is working in conjunction with the Committee on Scientific Work on plans for the session.

The Committee on Scientific Work and the Committee on Postgraduate Course held a combined meeting for the original planning of the program for the session because it was felt that the Committee on Postgraduate Course, being in touch with county societies throughout the year, was in position to know what the membership wished to have presented on the program. The program has been arranged to consist of formal presentations by outstanding physicians, symposia, clinic presentations and panels on a wide variety of subjects.

Plans are in progress but have not reached completion on several unusual features for the session.

### MEDICINE IN THE NEWS

Under this caption, the July 15 issue of the *New York State Journal of Medicine* does some interesting pondering of the subject. The editorial follows:

"The recently terminated meeting of the House

of Delegates of the A.M.A. as reported in the press for popular information left much to be desired. Apparently, according to the press, the Association is still 'reactionary,' lacks even now a program for improved medical care, is unrepresentative of its physician membership, is dilatory and domineering. One ponders these press reports with some concern. If the A.M.A. is really like that, from what source has the admittedly excellent medical service in this nation stemmed? What agency has raised medical education to its present high standards? What agency has been responsible for improved hospitals, for better training of doctors as interns and residents? What agency, then, has been responsible for the suppression of quackery and the elimination of fraudulent medical advertising? Are these things 'reactionary,' for example? Of no value to the public? Of no consequence to the sick?

"We are not informed in the press reports whence these real values emanated. They are so much accepted as a matter of course that in these busy days no one bothers himself to consider that, without these real values, built up over the years patiently and enduringly, better distribution of good medical service on whatever basis would be impossible, because it would not exist. Even so relatively recent a development as voluntary hospital and medical care insurance would be a farce if the hospitals and the doctors had not been able, through long years of preparation, to implement such insurance by the highest attainable skills.

"As pointed out by the A.M.A., the voluntary hospital and medical care insurance development in the United States, the trustees declared, has been the most rapidly growing insurance project in the history of the country.

"The movement started slowly. At the end of the first seven years of voluntary hospital insurance under the Blue Cross, only 2,870,000 subscribers were enrolled. Now, after about sixteen years, there are 32,500,000 enrolled in the Blue Cross and over 20,000,000 enrolled in industrial and commercial types of plans, and all three types are continuing their rapid growth.

"For the protection of the public the American Medical Association has aided in the development of standards for voluntary insurance plans. The Association is conducting a campaign to educate both the public and the profession on the value of voluntary medical care plans.

"The Association has recognized the desirability of a national voluntary enrollment agency for the nonprofit plans to facilitate interchange and enrollment of companies with national payrolls. It is believed that at least 80,000,000 will be enrolled within a reasonable time in voluntary hospital and medical care plans. When we add this number to the 24,000,000 now receiving their medical care in whole or in part from the government, the industrial workers covered by established health plans, and the approximately 5,000,000 indigent, it will be seen that a greater portion of the population will be provided for than by any other means suggested.

"Of the establishment of local public health units the trustees said:

"Prevention of disease at the source will decrease the need for medical care. There are bills now in Congress to extend Federal aid to communities needing it for this purpose. We support legislation which will permit aid to local communities.

"There is a shortage of qualified public health officials and the public health schools are graduating too few students. The reasons for this are largely monetary and political.

"As a matter of fact, much of the pioneering study and experience with respect to the improvement of good medical service distribution, as any doctor should know, has been initiated and carried out on the local level. A little thought on the subject shows why. Conditions are so different, real needs so various in this country, that only by local experiment, by trial-and-error procedure can workable methods be arrived at by representatives of the medical profession, agencies of government, and the various sections of the public such as industry, farming, labor, and the like. Procedure which is acceptable in one area fails sometimes to produce the same result in another. Thus difficulties increase as one goes from county to state level and from there to national considerations.

"It should not be forgotten also that responsible leadership in farm organizations, in labor groups, and in many industries is a matter of relatively recent development and even now is less than ideal.

"Government, too, cannot be counted on to exhibit that nonpolitical responsibility and impartiality at all times which is conducive to orderly development of plans for the better distribution of good medical service. This is somewhat less disastrous at the local level where the citizens can see what is happening.

"With these considerations in mind, the reasons for the most successful experimentation at the lower levels becomes clear. Such recommendations as the county societies make are carried by their delegates to the state societies and from there if thought practical to the national Association. Obviously, what may be entirely workable at any given county level may not work at all or not too well in another environment. However, most of the progress originates on the local level within the framework of the *principles* established at the higher policy levels.

"Perhaps it is not possible, concededly it is difficult for news stories of recent happenings to convey a proper (in the sense of comprehensive) regard for the sequential background of evolutionary development.

"People and institutions are largely judged by the *last* things they have or have not done, regardless of the context of history, from which their last actions are divorced by journalistic limitations of time, space, and perhaps an unfamiliarity on the part of writers with the background.

"Certainly, progress is being made by hardworking doctor-delegates and their leaders consistent

with the degree of responsibility and liability involved where human lives and health are concerned. Such doctors infrequently wear the silk hat, morning coat, and striped pants of formal diplomacy, they make mistakes like other humans, but they do produce the best possible medical service, they *are* the A.M.A., and, given time and public cooperation, will solve the vexing problems in keeping with the medical needs of this industrial day."

## NEWS NOTES

Physicians who have appeared recently on programs of component medical societies under the auspices of the Committee on Postgraduate Course follow:

Merl J. Carson, M.D., Donald Thurston, M.D., and W. G. Klingberg, M.D., St. Louis, appeared on a panel discussion on "Respiratory Infections in Children" at a five-counties joint dinner meeting at the Southern Air, Wentzville.

A. M. Estes, M.D., Jackson, spoke at an evening dinner meeting of the Tenth Councilor District at Kennett on "Coronary Heart Disease."

Sim Beam, M.D., St. Louis, spoke at a meeting of the Jasper County Medical Society at Joplin on "Rickettsial Diseases."

Frank McDowell, M.D., St. Louis, spoke at a meeting of the St. Francois-Iron-Madison-Washington-Reynolds Counties Medical Society at State Hospital No. 4, Farmington, on "Cancer of the Face and Mouth."

O. J. Gibson, M.D., Cape Girardeau, spoke at an evening dinner meeting of the Tenth Councilor District at Kennett on "Toxemias of Pregnancy."

J. William Thompson, M.D., St. Louis, spoke at an evening dinner meeting of the Ninth Councilor District at Rolla on "Differential Diagnosis of the Acute Abdomen."

Alvin E. Vitt, M.D., St. Louis, spoke at a meeting of the St. Francois-Iron-Madison-Washington-Reynolds Counties Medical Society at Farmington, on "Common Prostatic Conditions."

David Goldring, M.D., St. Louis, spoke at a meeting of the Phelps-Crawford-Dent-Pulaski Counties Medical Society at Newburg on "Diagnosis and Management of Heart Conditions in Children to Age 12."

Harold L. Gainey, M.D., Kansas City, spoke at an evening dinner meeting of the Sixth Councilor District at Nevada on "Pelvic Endometriosis."

Paul O. Hagemann, M.D., St. Louis, spoke at an evening dinner meeting of the Ninth Councilor District at Rolla on "The Management of Arthritis."

Robert J. Mueller, M.D., St. Louis, spoke at a meeting of the St. Francois-Iron-Madison-Washington-Reynolds Counties Medical Society at Farmington on "Psychosomatic Medicine."

James A. Jarvis, M.D., Kansas City, spoke at an evening dinner meeting of the Eighth Councilor





## Soft Diet trying your patients' patience?

### — try palatable Swift's Strained Meats



### *Tempting, natural source of complete protein*



#### 6 varieties:

Beef, lamb, pork,  
veal, liver, heart

The things some patients on soft, smooth diets have to eat! It's no wonder appetites lag.

To perk up patients' interest in foods, many doctors now prescribe specially prepared Swift's Strained Meats when soft foods are indicated in a high-protein, low-residue diet. They help two ways. *One*, Swift's Strained Meats taste so good. Few patients can turn down real meat goodness. *Two*, an excellent source of B vitamins, Swift's Strained Meats help restore patients' natural appetite for all foods.

Originally prepared for infant feeding, Swift's Strained Meats are soft, smooth (may easily be used in tube-feeding), slightly salted—cooked to retain all their delicious meat flavor. Six kinds for variety: beef, lamb, pork, veal, liver, heart. Each one 100% meat, they provide an excellent, palatable source of complete, high-quality proteins and hemapoeitic iron. These meats make available *simultaneously* all known essential amine acids... for optimum protein synthesis. Convenient — Swift's Strained Meats are ready to heat and serve.

The makers of Swift's Strained Meats invite you to send for your copy of "The Importance of Protein Foods in Health and Disease"—a physician's handbook of protein feeding, written by a doctor. Send to:

**SWIFT & COMPANY**  
Chicago 9, Illinois



All nutritional statements in this advertisement are accepted by the Council on Foods and Nutrition of the American Medical Association.

For patients who can take  
foods of less fine consistency  
—Swift's Diced Meats  
offer tender morsels of nu-  
tritious meat with tempting  
flavors patients appreciate.



District in Joplin on "The Use of Aureomycin and Chloromycetin in General Practice."

T. E. Sanders, M.D., St. Louis, spoke at a meeting of the Chariton-Macon-Monroe-Randolph Counties Medical Society on "Common Eye Conditions."

Wallis Smith, M.D., Springfield, President of the Association, spoke at the following meetings on "A Few Things to Think About," Sixth Councilor District meeting, Eighth Councilor District meeting, Ninth Councilor District meeting and the Second Councilor District meeting.

Maxwell G. Berry, M.D., Kansas City, spoke at an evening meeting of the Eighth Councilor District in Joplin on "Cardiac Arrhythmias: Their Treatment and Non-treatment."

Walter Tillman, M.D., Bolivar, spoke at an evening dinner meeting of the Sixth Councilor District at Nevada on "The Missouri Academy of General Practice."

The following physicians appeared on the program of the Second Councilor District meeting in Moberly sponsored jointly by the Committee on Postgraduate Course and the Missouri Division of the American Cancer Society: Hollis Allen, M.D., St. Louis, "The Responsibility of the Practitioner in the Early Pathologic Diagnosis of Cancer"; Phil C. Schreier, M.D., Memphis, Tennessee, "What the Practitioner Sees Through the Speculum in the Diagnosis and Treatment of Gynecologic Conditions"; John Mayer, M.D., Kansas City, "The Diagnosis and Treatment of Tumors of the Lung"; Alfred J. Cone, St. Louis, "The Differential Diagnosis of Esophageal Lesions."

Physicians who have filled speaking engagements recently under the auspices of the Committee on Health and Public Instruction are:

Robert Mueller, M.D., St. Louis, spoke at an evening dinner meeting of the Chamber of Commerce, Sikeston, on "Socialized Medicine."

Duff Allen, M.D., St. Louis, spoke at an evening dinner meeting of the Kirkwood Lions Club on "Socialized Medicine."

James R. McVay, M.D., spoke at a meeting of the Cole County Medical Society on "Socialized Medicine and the American Medical Association's Educational Program."

William J. Shaw, M.D., Fayette, spoke at a meeting of the Kiwanis Club of Kirksville on "Socialized Medicine."

R. Lee Cooper, M.D., Warrensburg, discussed "Socialized Medicine" at a regular meeting of the Warrensburg Lions Club on June 9.

C. C. Dennie, M.D., Kansas City, has been named president of the American Dermatological Association.

J. R. Bridges, M.D., Kahoka, represented the earliest class represented at a reunion of alumni of the College of Physicians and Surgeons, Keokuk,

Iowa, which was held at the Country Club in Keokuk on June 13.

R. E. Bruner, M.D., and Herbert L. Mantz, M.D., Kansas City, were guest speakers at a regional Vocational Rehabilitation meeting at Omaha on June 10.

The James Archer O'Reilly Training Center, the new headquarters of the St. Louis Society for Crippled Children, was dedicated as a memorial to the late Dr. J. Archer O'Reilly at ceremonies on June 1. A portrait of Dr. O'Reilly was unveiled at the ceremonies.

## MUSINGS OF THE FIELD SECRETARY

A young, well-trained physician paid a visit to the Association office a few weeks ago and indicated his desire to locate in a small town in rural Missouri, where he would be reasonably close to hospital facilities. He visited one of the suggested locations and was given a nice reception by various citizens of the town; nice enough that he decided that was the place for him. This particular community has no resident M.D. but is served by one or two physicians from another town who hold office hours there on certain afternoons each week.

The young doctor, with one or two prominent citizens of the town, then paid a visit to the nearby hospital to request hospital privileges. Lo and behold, his request was given a cold reception and it was even suggested that he locate in some community other than the one he had selected.

This story ends with rural Missouri losing another much needed physician to one of the neighboring states. It would be interesting to know just why this particular hospital appeared so reluctant to grant its privileges to this physician in question.

H. E. Slusher, President of the Missouri Farm Bureau, appearing before the Murray subcommittee of the Senate Committee on Education and Labor on June 21, representing the American Farm Bureau Federation, told the Committee that the Farm Bureau opposes a compulsory national health insurance program for four definite reasons: one, there are no facts to prove that there is need for such a program; two, no country operating under a compulsory health program has as high a health standard as has this country; three, such a program would be prohibitive in cost; four, the people have not asked for such a program.

## DEATHS

**Sparhawk, William J., M.D.,** Cape Girardeau, a graduate of Barnes Medical College, 1903, member of the Cape Girardeau County Medical Society; aged 69; died April 25.

**Krause, Irl B., M.D.,** Jefferson City, a graduate of St. Louis University School of Medicine, 1921; Fellow of the American Medical Association; member and for-





# Dorsey *Going Your Way*

FOLLOWING a parallel route to a similar destination, the ethical pharmaceutical maker necessarily keeps the progress and direction of scientific medicine constantly in view.

For a closer look at medicine's progress and full comprehension of its implications, the Smith-Dorsey Company has expanded its research facilities, secured increased research grants and added research personnel.

THE SMITH-DORSEY COMPANY • Lincoln, Nebraska BRANCHES AT LOS ANGELES AND DALLAS



MANUFACTURERS OF  
AQUEOUS SUSPENSION OF ESTROGENIC SUBSTANCES • DORSEY  
AMINOPHYLLINE SUPPOSITORIES • DORSEY

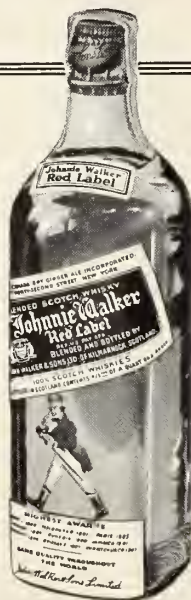
## Meet Scotland's Favourite Son



And it goes without saying that in Scotch whisky . . . that favourite son is Johnnie Walker! Just savour its glowing richness of body and flavour . . . and you'll see why.

# JOHNNIE WALKER

Born 1820, still going strong. Blended Scotch Whisky . . . Red Label . . . Black Label . . . both 86.8 proof. Canada Dry Ginger Ale, Inc., New York, N. Y., Sole Importer.



**Noncancellable  
Guaranteed Renewable  
Incontestable  
Disability Insurance**

**C. E. HOVEY**  
*General Agent*

**Massachusetts Indemnity**  
Five-O-Six Olive Street Saint Louis

### Cook County Graduate School of Medicine Announces Continuous Courses

**SURGERY**—Intensive Course in Surgical Technique, Two Weeks, starting August 22, September 26, October 24.

Surgical Technique, Surgical Anatomy & Clinical Surgery, Four Weeks, starting September 12, October 10.

Surgical Anatomy & Clinical Surgery, Two Weeks, starting September 26, October 24.

Surgery of Colon & Rectum, One Week, starting September 12, October 10.

Esophageal Surgery, One Week, starting October 10.

Thoracic Surgery, One Week, starting October 3. Breast & Thyroid Surgery, One Week, starting October 10.

Fractures & Traumatic Surgery, Two Weeks, starting October 3.

**GYNECOLOGY**—Intensive Course, Two Weeks, starting September 26, October 24.

Vaginal Approach to Pelvic Surgery, One Week, starting September 19, November 7.

**OBSTETRICS**—Intensive Course, Two Weeks, starting September 12, November 7.

**MEDICINE**—Intensive Course, Two Weeks, starting October 3.

Gastroenterology, Two Weeks, starting October 24. Gastroscopy, Two Weeks, starting September 26, October 24.

Electrocardiography & Heart Disease, Four Weeks, starting September 7.

**DERMATOLOGY**—Formal Course, Two Weeks, starting October 24. Informal Clinical Course every two weeks.

**ROENTGENOLOGY**—Diagnostic & Lecture Course First Monday of every month.

Clinical Course Third Monday of Every month. X-Ray Therapy every two weeks.

**UROLOGY**—Intensive Course, Two Weeks, starting September 26.

Ten Day Practical Course in Cystoscopy every two weeks.

**GENERAL, INTENSIVE AND SPECIAL COURSES IN ALL BRANCHES OF MEDICINE, SURGERY AND THE SPECIALTIES.**

**Teaching Faculty**—Attending Staff, Cook County Hospital Registrar, 427 South Honore St., Chicago 12, Ill.



mer president of the Cole County Medical Society; aged 55; died May 29.

**Russell, John J., M.D.**, Deepwater, a graduate of the University Medical College of Kansas City, 1889; member and former president of the Henry County Medical Society; aged 88; died June 2.

**Loveland, William S., M.D.**, Joplin, a graduate of Curtis Physio-Medical Institute, Marion, Ohio, 1893; honor member of the Jasper County Medical Society; aged 81; died June 8.

**Parker, Ray H., M.D.**, Hunnewell, a graduate of the St. Louis College of Physicians and Surgeons, 1917; Fellow of the American Medical Association; member of the Shelby County Medical Society; aged 60; died June 14.

**Davis, Charles B., M.D.**, Walker, a graduate of the Louisville Medical School, 1893; honor member of the Vernon-Cedar County Medical Society; aged 82; died June 15.

**Kieffer, Victor B., M.D.**, St. Louis; a graduate of Barnes Medical College, 1905; Fellow of the American Medical Association; member of the St. Louis Medical Society; aged 68; died June 23.

**Mitchell, John E., M.D.**, Sedalia, a graduate of the Missouri Medical College, 1898; Fellow of the American Medical Association; member and former president of the Pettis County Medical Society; aged 77; died July 2.

## SOCIETY PROCEEDINGS

### FOURTH COUNCILOR DISTRICT

OTTO W. KOCH, CLAYTON, COUNCILOR

#### Lincoln County Medical Society

Twenty-five physicians from Lincoln, Montgomery, Pike, St. Charles and Warren counties attended a joint medical dinner meeting at the Southern Air, Wentzville, on June 9.

The program consisted of a panel discussion on "Respiratory Infections in Children." The panel members were Merl J. Carson, M.D., Donald Thurston, M.D., and W. G. Klingberg, M.D., from the Department of Pediatrics, Washington University School of Medicine and St. Louis Children's Hospital, St. Louis.

The many practical questions directed to the members of the panel were evidence of the interest in this type of program.

J. C. CREECH, M.D., Secretary.

### NINTH COUNCILOR DISTRICT

E. C. BOHRER, WEST PLAINS, COUNCILOR

#### Phelps-Crawford-Dent-Pulaski County Medical Society

Forty people, including physicians, their wives and guests, attended an evening dinner meeting of the Phelps-Crawford-Dent-Pulaski County Medical Society at Pippin's Resort, Waynesville, on June 24.

The program was arranged by the Committee on Control of Venereal Disease of the Association in collaboration with the State Division of Health.

W. S. Sewell, M.D., Springfield, spoke on "Penicillin Treatment of Syphilis."

E. M. Cannon, M.D., St. Louis, discussed "Modern Methods in the Treatment of Gonorrhea."

E. A. Belden, M.D., Jefferson City, of the Division of Health, spoke on "Venereal Disease Control."

It was announced at the meeting that the Division of Health is arranging a new program for the dispens-

ing of penicillin to physicians for the control of venereal disease.

The last speaker on the evening's program was Mr. E. E. Percy, Field Representative of Group Hospital, Inc., St. Louis, who discussed "New Developments in Blue Cross."

M. K. UNDERWOOD, M.D., Secretary.

### South Central Counties Medical Society

The South Central Counties Medical Society met for a dinner meeting at the El Patio Hotel in Cabool, June 17, with the following members and guests present: Drs. J. R. Mott, Hartville; J. A. Fuson, Mansfield; L. T. VanNoy, Norwood; R. W. Denney, R. A. Ryan, H. G. Frame and A. C. Ames, Mountain Grove; Garrett Hogg, Jr., Cabool; T. J. Burns, Houston; Leslie Randall and H. L. Reed, Licking; E. C. Bohrer, Rollin H. Smith, C. F. Callihan and A. H. Thornburgh, West Plains; W. S. Sewell, Springfield; E. M. Cannon, St. Louis; E. A. Belden Jefferson City, and Mr. Raymond McIntyre, St. Louis.

After dinner, the meeting convened in the office of Dr. Hogg.

Dr. Sewell spoke on "Penicillin Treatment of Syphilis," Dr. Cannon spoke on "Modern Methods in the Treatment of Gonorrhea" and Dr. Belden spoke on "Venereal Disease Control." All the talks were well received and appreciated.

The application of S. W. Connor, M.D., Mountain Grove, was presented and he was unanimously elected to membership.

The meeting adjourned to meet in Mountain Grove on July 15.

A. C. AMES, M.D., Secretary.

## MISCELLANY

### LICENSURE OF FOREIGN MEDICAL GRADUATES

The Committee on Foreign Medical Credentials, an unofficial body sponsored by the Council on Medical Education and Hospitals of the American Medical Association and composed of invited individuals from organizations interested in the problem of foreign physicians has issued for the information of the public and the governmental agencies concerned with the licensure of physicians, a summary of the problems involved in the licensing of foreign medical graduates and its recommendations for their solution.

The membership of the Committee includes individuals from the following organization: Advisory Board for Medical Specialties, Association of American Medical Colleges, Council on Medical Education and Hospitals, Department of State, Federation of State Medical Boards, Illinois Department of Registration and Education, Institute of Inter-American Affairs, Institute of International Education, W. K. Kellogg Foundation, Medical Examining Board of Connecticut, Minnesota State Board of Medical Examiners, National Board of Medical Examiners, New York State Board of Medical Examiners, Pan American Sanitary Bureau, Rockefeller Foundation, United States Office of Education, Wisconsin State Board of Medical Examiners, World Health Organization, World Medical Association.

The licensure of physicians who have received their medical degrees from foreign institutions seems certain to present a growing problem for the licensing bodies of the forty-eight states, the District of Columbia and

the territories and outlying possessions of the United States and for the National Board of Medical Examiners. The unsettled economic and political conditions in many parts of the world have already stimulated many physicians to migrate to the United States and it may be predicted that the number seeking to migrate will increase in the years ahead. In addition, each year a number of Americans enter foreign medical schools with the expectation of returning to the United States to practice. Some of these students study abroad because they are unable to gain admission to an American medical college while others do so from choice.

The problem of the physician who has graduated from a foreign medical school promises to confront the public, various legislative bodies and the licensing boards with increasing frequency during the next several years. The problem has important and far reaching implications for the health and safety of the people of the United States. It is important, therefore, that the public be provided with information to serve as the basis for intelligent opinion and that legislative and licensing bodies be prepared to adopt an enlightened policy in deciding questions pertaining to the licensure of foreign trained physicians.

Two basic principles are involved in the licensure of physicians whether they be graduates of domestic or foreign schools. The first principle and one that has long been recognized by all states and nations is the requirement that a physician satisfy a licensing body representing the public as to his competency before he is permitted to practice. This principle is essential for the protection of the public. Without this requirement, the people of a community cannot distinguish those physicians who are competent to provide medical care from those who are not.

Similar requirements for licensure or equivalent certification by an appropriate public agency have been established for the protection of the people in many profession and non-professional occupations. Such occupations include architects, dentists, engineers, veterinarians, lawyers, nurses, electricians and plumbers. The principle of licensure by legally created agencies of the state has become so well established in the society of this country that its value and validity cannot be questioned.

The second principle involved is that the training a man has undergone in preparing to enter a profession is a paramount factor in determining the quality of his professional practice. It must be admitted that exceptional men may rise above the limits of their training, but this achievement is accomplished frequently only after years of experience in practice and additional training. To allow an inadequately trained physician to attempt to perfect himself through the mistakes of years of practice is to permit unwarranted and unnecessary abuse of patients who entrust their health and lives to him.

An important corollary of this second principle is that the best assurance of the quality of the training that a physician has received is an intimate knowledge of the faculty, facilities, curriculum and standards of the medical school from which he has graduated. The art and science of conducting examinations has not yet advanced to the point where full reliance can be placed on the results of the type of examinations to which licensing boards are limited by considerations of practicality. Only when the results of such examinations are coupled with an evaluation of the quality of training that a physician has received can a licensing

board be reasonably confident that a physician is adequately prepared to assume the responsibilities that are an inevitable part of his practice.

In licensing graduates of American and Canadian schools, the various state licensing boards have for many years had the benefit of the findings of periodic thorough surveys of these schools carried out by the two accrediting bodies, the Council on Medical Education and Hospitals of the American Medical Association and the Association of American Medical Colleges. Some of the state licensing boards supplement this information with investigations of their own although it is beyond the resources of most boards to inspect periodically all the eighty medical schools in the United States and Canada.

It should be pointed out that the present high standards of medical practice in the United States has been the direct result of the recognition by the licensing boards that evaluation of the school from which a physician graduates is equally important as evaluation of the physician himself. Before this principle was generally recognized, the country was overrun with physicians who, armed with a degree from a low grade school or out-right diploma mill, succeeded in one way or another in passing the examinations for licensure. The needless suffering and injury perpetrated by the incompetent and at times fraudulent practices of many of these inadequately trained men constitute a dark chapter in the history of medicine.

While it has been possible for the two accrediting agencies referred to, to maintain current appraisals of the quality of education offered by American and Canadian medical schools, it has been beyond their resources to attempt to maintain a similar inventory of the three hundred or more medical schools in other parts of the world. For many years this was not important because the numbers of physicians migrating to the United States was small and most foreign trained physicians came from medical schools that were well known in America.

Between 1930 and 1939 two developments occurred that entirely changed the situation. Unsettled and unfavorable conditions abroad prompted large numbers of physicians to migrate to this country. At the same time, internal developments in many countries led to a rapid deterioration in the quality of medical education. This change, which was readily apparent to American physicians travelling abroad in the years immediately prior to the war, was greatly accelerated when these countries became involved in World War II. The pressures of the war reduced the quality of medical education in all countries, including the United States, but in many countries the effect was catastrophic. Faculties were decimated, buildings, libraries and equipment were destroyed or badly damaged, all contact with scientific developments in other countries was interrupted and standards were lowered in an effort to turn out large numbers of physicians to serve the armies of the warring nations. By the end of the war, medical education in other countries, with few exceptions, had degenerated to a degree that was shocking to those who had known these countries in the period up to 1930. While medical education in the United States recovered quickly from the war and is now at the highest point in its development, unsettled political and economic conditions in many foreign countries have prevented any similar recovery. Even more disturbing is the fact that some foreign countries appear to be committed to educational policies that are so



## A BIG TIME-SAVER FOR EVERY DOCTOR



This handy booklet for new mothers was "built to doctors' orders". It contains blank forms for filling in your instructions and formulas.

It provides a permanent case-history record. A memo will bring you a sample...or as many as you want for your daily practice... without obligation.

Many doctors are prescribing "Daricraft Homogenized Evaporated Milk". It is always uniform, safe, sterilized, easy to digest, and high in food value and minerals. Daricraft contains 400 U. S. P. units of Vitamin D per pint.



PRODUCERS CREAMERY CO., SPRINGFIELD, MO.

Advertisement



From where I sit  
*by Joe Marsh*

## Who's A Foreigner?

*While I'm waiting for a haircut a couple of days ago, Slim Hartman lets slip with a crack about those "foreigners" who recently moved in down by the depot.*

"Now wait a minute, Slim," snaps Doc Sherman. "Don't forget we're all 'foreigners' more or less. Some of our families have simply been here *longer* than others. But even if they came over on the Mayflower, they were foreigners to the Indians."

*Slim gets a little red and you could see that Doc had him. "And the reason they came here," he goes on, "was to find freedom to do and think as they wanted to, just so long as they didn't tramp on any of the rights of the other fellow."*

From where I sit, America became the great land it is today through our being tolerant of different people and different tastes—whether it's a taste for square dancing or waltzing, radio or movies, goat's milk or a temperate glass of sparkling beer.

*Joe Marsh*

Copyright, 1949, United States Brewers Foundation

unsound and so inferior that there is serious doubt that satisfactory standards of medical education will be re-established at any time in the foreseeable future.

It is against this background that the problem of the foreign trained physician must be studied. Their complete exclusion from the United States cannot be reconciled with the traditional role of this country as the land of opportunity. The fact that few foreign countries will admit the graduates of American medical schools to practice should not be accepted as a valid reason for pursuing a reciprocal policy. It is well, however, for the people to know that the United States is the most liberal of all countries in licensing physicians who have not graduated from their own schools.

While a policy of complete exclusion cannot be defended, it is clear that until more information can be obtained about the present quality of medical schools abroad, the licensing boards would fail in their responsibility to the public if they did not use the greatest care and discretion in admitting foreign trained physicians to their examinations.

Detailed current knowledge of foreign medical schools is indispensable for the guidance of state licensing boards in determining which foreign physicians have had sound training. It is essential that the various agencies concerned with this problem unite their resources and devise a satisfactory method for securing this information at the earliest possible date. It will not be an easy task and it is improbable that well documented evaluations can be made of all foreign schools in the same manner as is done for American and Canadian schools. The geographic and physical aspects of the problem alone present great difficulties. International relations will undoubtedly also limit the extent to which such a study can be carried out. One of the greatest difficulties will be to appraise accurately the great changes and fluctuations through which many schools have passed and are continuing to pass.

From such a study, however, it should be possible to derive a list of foreign medical schools which have maintained during specific periods, or are now maintaining, educational programs sufficiently comparable to the training offered by the medical schools of this country to warrant the admission of their graduates to the examinations of the licensing boards of the forty-eight states, the District of Columbia and the territories and outlying possessions of the United States as well as the examinations of the National Board of Medical Examiners.

As an added safeguard it would seem entirely reasonable that whenever a candidate cannot present evidence to a state licensing board that he is sufficiently familiar with recent scientific advances in medicine, with the practices and customs of American medicine, and with the English language, that he be required to take additional training in this country before being permitted to appear for examination. There is every reason to believe that the various licensing boards can develop regulations covering these points that will be fair to the foreign graduate and adequate to protect the public.

The American people are today well served by the licensing boards which they have duly constituted by law to protect them from incompetent practitioners of the healing arts. It is to be hoped that the people will continue to have confidence that these licensing bodies are acting for their best interests according to well established principles.

The licensing bodies and the governments to which they are responsible have a heavy obligation to con-

tinue their efforts to maintain high standards of medical practice. They must also recognize that the spirit and tradition of America places upon them an obligation not to deny the opportunity to practice his profession to any citizen or prospective citizen who can demonstrate satisfactory qualifications as to his professional competence and character.

If the problem of the foreign medical graduate is approached in this spirit, the Committee on Foreign Medical Credentials is confident that it will be solved without lowering the standards of American medicine and in a manner consistent with our national ideals of justice and humanitarianism.

## TUBERCULOSIS ABSTRACT

*Issued Monthly by the National Tuberculosis Association, August, 1949*

There has been little research directed at testing the efficiency of mechanical barriers to the air-borne passage of tubercle bacilli. Yet the importance of this type of study scarcely needs to be pointed out to the physician and the nurse whose duties bring them in close contact with cases of active tuberculosis.

### THE EFFICIENCY OF GAUZE MASKS

Although there is no certain knowledge as to the size of the infectious particles concerned in the origin of human inhalation tuberculosis, there is considerable evidence to suggest that these are much smaller than the limits of ordinary visibility. Primary pulmonary tuberculosis in man takes root not in the upper respiratory passages but deep in the lung parenchyma, usually beneath the pleura. The effective pathogenic units must be assumed, therefore, to be smaller than the lumina of the terminal bronchioles. That the tubercle bacilli-containing-particles responsible for naturally acquired air-borne pulmonary tuberculosis in rabbits are of microscopic dimensions is indicated by the fact that ultraviolet irradiation of the air of a room contaminated by tubercle bacilli protected rabbits from an air-borne contagion that caused progressive tuberculosis in 73 per cent of animals of the same genetic resistance similarly exposed in an unirradiated room. The ventilation of the irradiated room was such that some of the droplet nuclei of tubercle bacilli floating in the air were exposed to irradiation for only one second before inhalation by the exposed rabbits.

Therefore, it was not certain whether gauze masks with pores of relatively large magnitude, such as may be worn by individuals exposed to air-borne contagion of human tuberculosis, would filter out the dangerous invisible droplet nuclei of tubercle bacilli. There is evidence that six layer gauze masks, especially after repeated washing, will remove bacteria floating in the air without interfering with respiration.

Miss Esta H. McNett, of the Veterans Administration, designed a six-layered gauze mask to be worn by nurses engaged in the care of tuberculous patients. The efficiency of these masks was studied in an apparatus for quantitative air-borne infection modelled after the one described by Wells. The protective action of the gauze masks developed by Miss McNett was tested against the quantitative inhalation of droplet nuclei of tubercle bacilli which regularly induce pulmonary tuberculosis in rabbits.

The essential feature of the instrument was a nebulizer which generated droplet nuclei of tubercle bacilli. Most of these nuclei contained isolated bacilli; only



# COSMO CAUTERY COMPANY

4215 Virginia Ave.

St. Louis 11, Mo.

## COSMO CERVIX COAGULATOR

Cervical treatment by electro-coagulation with this unit is superior to other methods because the doctor can control the extent of coagulation and reach the deeply imbedded infections.

This unit will not create nauseating smoke and odor due to searing tissue and gives the doctor greater freedom of post-operative complications such as stenosis, excessive scar tissue, etc.

Furnished with leatherette carrying case and 3 interchangeable silver applicators for striping, spotting and puncturing.

## COSMO CAUTERY UNIT

Removal of verucca, nevi, etc., with a Cosmo Cautery Unit provides a gentle, effective office treatment with a minimum of patient discomfort.

The unit is easy to operate; technic requires no anesthetic; heat is controlled and device shockproof. Usable around eyes and hairline; will not cause scar tissue.

Furnished with leatherette carrying case and 5 interchangeable silver applicators. The applicators are graduated in sizes to handle various sized blemishes and assure even sloughing.



Only \$26.50  
Complete



Only \$22.50  
Complete

ONE YEAR GUARANTEE

Ask Your Dealer for Descriptive Literature

ST. LOUIS

A. S. Aloe Co.  
Hamilton-Schmidt Co.  
Edmund F. Hanley Co.  
Charles A. Schmidt Co.

KANSAS CITY

A. S. Aloe Co.  
Chas. Russell Co. Inc.  
Goetze-Niemer Co.

JOPLIN

Goetze-Niemer Co.

ST. JOSEPH

Goetze-Niemer Co.

# MILWAUKEE SANITARIUM

WAUWATOSA, WISCONSIN

## FOR NERVOUS DISORDERS

Maintaining the highest standards for more than a half century, the Milwaukee Sanitarium stands for all that is best in the care and treatment of nervous disorders. Photographs and particulars on request.

(Chicago Office— 1117 Marshall Field Annex  
Wednesday, 1-3 P. M.)

JOSEF A. KINDWALL, M.D.  
CARROLL W. OSGOOD, M.D.  
WILLIAM T. KRADWELL, M.D.  
BENJAMIN A. RUSKIN, M.D.  
LEWIS DANZIGER, M.D.  
RUSSELL C. MORRISON, M.D.  
G. CHARLES SUTCH, M.D.  
RAYMOND HEADLEE, M.D.  
ARTHUR J. PATEK, M.D., Consultant

G. H. SCHROEDER, Business Manager

COLONIAL HALL—One of the 14 Units in "Cottage Plan."



occasionally were minute clumps, not larger in diameter than a red blood cell, liberated into the air. This infected air was drawn into an exposure chamber, into which the heads of the rabbits to be exposed protruded through a close-fitting collar. The infected air circulated past the noses of the rabbits and was removed through an exhaust pipe.

Three and six-layer masks, 40 by 44 threads to the square inch, were sewn to fit the contour of the rabbit's head, neck and ears. The gauze in front of the rabbit's nose and mouth had no seams.

Rabbits without masks and rabbits wearing masks were exposed simultaneously to the inhalation of air containing drop'et nuclei of virulent bovine tubercle bacilli of the Ravenel strain.

It was found that, if all the air respired by rabbits exposed to the inhalation of droplet nuclei of virulent bovine tubercle bacilli passes through three or six-layer gauze masks, there is a 90 to 95 per cent reduction in the incidence of primary pulmonary tuberculous foci which develop within five weeks. It would follow that, if the respired air contains but a few bacilli, the masked animal will usually be protected from an otherwise fatal infection. Twelve of 20 masked animals were completely protected against air-borne contagion of such intensity that from 29 to 1,027 tubercle bacilli units were deposited in the lungs of simultaneously exposed unmasked rabbits.

Measurements of the thread diameters and inter-thread spaces of these masks by H. Shapiro showed that the superimposition of three to six layers of this material would occlude practically all of the spaces and in this way explain the results of the experiments.

One must be extremely guarded in applying these data to the protection of human beings. With the rabbits all of the respired air passed through the masks. To be equally effective for human beings exposed to air-borne infection of tuberculosis, masks must be worn in an equally effective manner. The masks protected rabbits from air populated with droplet nuclei of tubercle bacilli to a degree that would rarely, if ever, be found in the air respired by human beings. Human primary tuberculosis usually originates as a single pulmonary focus, whereas the unmasked rabbits in these experiments developed an average of 51 primary tubercles. Nevertheless, it seems reasonable to advise persons wearing masks to refrain from deep inspiration which may diminish the filtering efficiency of the masks.

Conversely, masks worn by coughing patients can hardly be expected to retain the invisible droplet nuclei containing tubercle bacilli propelled through them during fits of coughing.

*Summary*—Under the conditions of the experiments, from 90 to 95 per cent of pathogenic droplet nuclei of virulent bovine tubercle bacilli in the respired air can be removed by gauze masks properly worn by rabbits during quiet breathing of heavily infected air.

#### THE FACE MASK IN TUBERCULOSIS

The major obstacle to the rapid expansion of better care for tuberculosis patients and to the education of student nurses in tuberculosis nursing seems to be the recognized danger of contagion. The only known methods of protection for nurses against tuberculosis are: BCG (Bacillus Calmette Guérin) vaccine, available only to tuberculin-negative nurses, and communicable

disease technic, based upon the use of mechanical agents—cap, mask, gown, and hand-washing. None of these agents except the mask protects nurses and auxiliary workers from infection by inhalation which modern medical opinion regards as one of the most important mechanisms in the transmission of tuberculosis.

The Face Mask in Tuberculosis, Esta H. McNett, R.N., *American Journal of Nursing*, January, 1949.

#### COUNTY SOCIETY HONOR ROLL 1949

(Societies which have paid Dues for All Members and date placed on Honor Roll)

Miller County Medical Society, December 8, 1948.  
Camden County Medical Society, December 10, 1948.

Benton County Medical Society, December 14, 1948.

Ste. Genevieve County Medical Society, December 16, 1948.

Laclede County Medical Society, December 18, 1948.

Dallas, Hickory, Polk Counties Medical Society, December 23, 1948.

Carter-Shannon County Medical Society, December 30, 1948.

Lewis, Clark, Scotland Counties Medical Society, January 3, 1949.

Audrain County Medical Society, January 5, 1949.

Webster County Medical Society, January 8, 1949.

Harrison County Medical Society, January 10, 1949.

Mississippi County Medical Society, January 12, 1949.

Howard County Medical Society, January 15, 1949.

Henry County Medical Society, January 16, 1949.

Morgan County Medical Society, January 19, 1949.

Callaway County Medical Society, January 21, 1949.

Carroll County Medical Society, January 24, 1949.

Pettis County Medical Society, January 26, 1949.

Holt County Medical Society, January 29, 1949.

Cape Girardeau County Medical Society, February 1, 1949.

Bates County Medical Society, February 8, 1949.

Mercer County Medical Society, February 8, 1949.

Pike County Medical Society, February 9, 1949.

Clinton County Medical Society, February 15, 1949.

St. Francois-Iron-Madison-Washington-Reynolds Counties, February 18, 1949.

Montgomery County Medical Society, February 24, 1949.

South Central Counties Medical Society, February 28, 1949.

Perry County Medical Society, March 10, 1949.

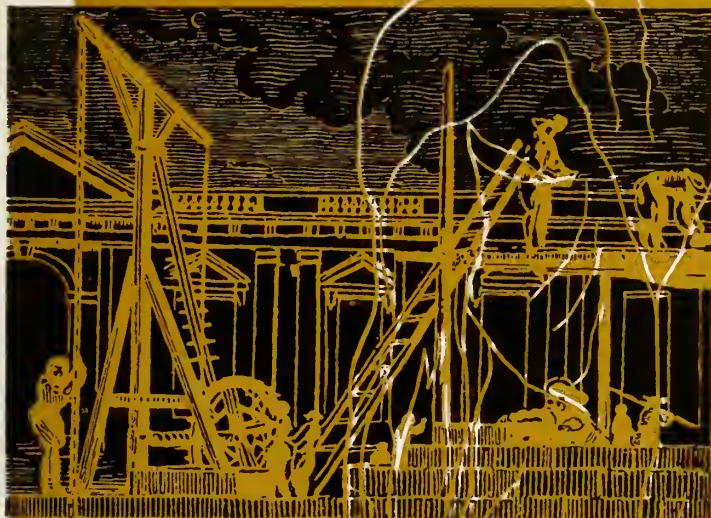
Andrew County Medical Society, March 12, 1949.

Cass County Medical Society, March 15, 1949.

St. Louis County Medical Society, April 27, 1949.

The Efficiency of Gauze Masks, Max B. Lurie, M.D., and Samuel Abramson, V.M.D., *American Review of Tuberculosis*, January 1950.





## Building stones

Tissue repair is the keystone of the recovery process. It makes little difference if the infection is halted, the fracture reduced, or the metabolic imbalance adjusted—it is the patient's own cells that must complete the cure.

While true hypoproteinemia is comparatively rare, nevertheless hypernutrition with essential amino acids during the

recovery process has been shown empirically to speed the patient upon the road to normal health. Amino acid preparations should be supplemented by moderate amounts of vitamins.

*Lederle* research has for some time been concerned with such mixtures of amino acids and vitamins and their application in the field of nutrition.

**LEDERLE LABORATORIES DIVISION** AMERICAN *Cyanamid* COMPANY  
30 ROCKEFELLER PLAZA • NEW YORK 20, N. Y.

## BOOK REVIEWS

**CLINICAL TOXICOLOGY** by Clinton H. Thienes, M.D., Ph.D., Professor of Pharmacology and Head of the Department of Pharmacology and Toxicology, School of Medicine, University of Southern California, Los Angeles; Attending Pathologist (Toxicology), Los Angeles County Hospital and Thomas J. Haley, Ph.D., Fellow in the Department of Pharmacology and Toxicology, School of Medicine, University of Southern California; Formerly Graduate Assistant in Pharmacology, University of Florida, and Formerly Medical Director of E. S. Miller Laboratories, Los Angeles. Second Edition. Enlarged and Thoroughly Revised. Illustrated. Lea & Febiger, Philadelphia. 1948. Price \$4.75.

The poisons are grouped in most instances according to their major toxic action; this should facilitate the use of this volume by the physician in the diagnosis and treatment of victims of poisons. Industrial poisons necessarily are included, the amount of space that could be allotted to them precludes the use of this text for other than a quick handy reference in dealing with the industrial diseases. The book is divided into nine sections containing 373 pages. Section one deals with the convulsant poisons. Frequently encountered poisons listed in this chapter are: cocaine, nicotine, phenol and, of course, many others. Medullary excitants are discussed in chapter two of this section: D.D.T., Metrazol, and Picrotoxin, to name only a few of those considered. Chapter three deals with cord convulsants such as strychnine and tetanus. Chapter four has to do with the peripherally acting convulsants, e.g., physostigmine, oxalate and fluoride, are some of the poisons grouped under this heading.

Section two takes in the central nervous system depressants. The alcohols, anesthetics, somnifacients, and analgetics are of course treated in this group and are all discussed briefly. The same style is maintained throughout the book. The poisons are listed as to their major toxic actions, muscle poisons, protoplasmic poisons, poisons of the blood and hematopoietic organs.

The authors list the poisons or chemicals, give when known the toxic dose, the source, the absorption, etiology of poisoning, symptoms and actions, duration of effects, fate and excretion, pathology, diagnosis and treatment.

Section seven should prove extremely helpful to students, interns and general practitioners since it summarizes what has been learned in the preceding chapters.

In section eight an excellent symptom diagnosis of poison as related to the body systems is presented.

Section nine deals with the chemical diagnoses of poisoning. This probably was intended more especially for the toxicologist, pathologist and public health officers. It does contain much information for the clinician as how to obtain and preserve specimens of suspected tissue and body fluids.

This book should prove a valuable text for students and general practitioners. In fact, any physician, regardless of his specialty, would find it profitable to review the toxic effects of drugs he uses or prescribes daily. A copy should be in the receiving room of all hospitals.

C. W. M.

**HANDBOOK OF DISEASES OF THE SKIN.** By Richard L. Sutton, M.D., Emeritus Professor of Dermatology and Syphilology, University of Kansas Medical School; and Richard L. Sutton, Jr., M.D., Associate Professor of Dermatology and Syphilology, University of Kansas Medical School. With 1057 Illustrations. C. V. Mosby Company. St. Louis. 1949. Price \$12.50.

The authors present this volume with the endeavor to place in the hands of students, practitioners, teachers and specialists a concise and complete textbook. Evalu-

ations are made on the basis of emphasis on the major subjects while the less important matter is subordinated.

In following through the chapters it is obviously the aim of the authors to glean the choicest material from their earlier works, excluding what time and medical research have replaced by new conceptions.

The volume comprises 720 pages, introduced by twenty-three chapter heads and digested by a carefully sifted index; black faced type indents each subject. An outstanding feature is the multiplicity of photomicrographs; there are more than 1,000 of these pictures.

Generous credit is accorded other writers, pointing out certain concepts and methods of treatment which are new, notably in contact dermatitis and hives. In both of these diseases it is fundamental to exhaust means and employ every art to establish the causative agent; the poly-dietary is suspended and the patient is given a few foods known not to cause allergic reactions; after a short interim other articles are added, one at a time. In case of allergic response the increment is denied and another is added to the list of allowed foods. This is clearly set forth in the chapter on urticaria.

The subject of neuroplasia, including cancer, has been excellently covered in forty-one pages and practically 100 illustrations.

Dermatomyces has been given special attention; classification of fungus diseases has been laboriously worked out, and the subject supplemented by many excellent photographs.

The citations given can be said to characterize the general plan of the book.

The volume, as a whole, merits nothing but constructive comment. It should be cordially greeted by the profession.

E. P. M.

**400 YEARS OF A DOCTOR'S LIFE**, collected and arranged by George Rosen, M.D., and Beate Caspari-Rosen, M.D. Henry Schuman. New York. 1947. Price \$5.00.

This book is composed of a collection of excerpts from the writings of a considerable number of doctors, ranging from Paracelsus, Cardona and Pare in the 16th Century to Sigerist, Grenfell and Alice Hamilton in the 20th. The subject matter deals with various phases of the doctor's life and covers such topics as early childhood, education, practice of medicine, the doctor as a scientist, scholar and teacher, marriage, the doctor as a patient, at war, writing and politics, and reflections on life and death. Many of the excerpts are preceded by a brief biography or explanatory note.

The book varies from an ordinary autobiography not only by presenting different viewpoints by different men in different periods on the same subject, but also, few dull parts to be waded through. It definitely is not a book to be swallowed whole in a single sitting but makes awfully good nibbling.

M. E. H.

**HANDBOOK OF OPHTHALMOLOGY.** By Everett L. Goar, M.D., Professor of Ophthalmology, Baylor University College of Medicine, Houston, Texas. With 48 Illustrations and 7 Color Plates. C. V. Mosby Company. St. Louis. 1948. Price \$5.50.

In his preface, Dr. Goar states that this book is based on a series of lectures for medical students who seem to find that, along with twelve other subjects, most texts on eye contain entirely too much material to grasp. With that idea in mind, the text is written primarily for medical students and general practitioners. It is well written and printed on a good grade of paper.

An unusual feature is the introductory historic sketch. The Babylonian code provided a strong penalty for the injudicious or unlucky surgeon of the times. "If a physician operates on a man and cause the man's death; or with a bronze lancet open an abscess of a





even after **40,**

**a woman does creative work...**

The urge to do creative or constructive work is often rekindled in the woman relieved of menopausal symptoms. Restraints placed on her talents by the nervousness, hot flushes and other manifestations of the climacteric may vanish entirely following the use of "Premarin."

In addition, there is a "plus" in "Premarin" therapy...the gratifying "sense of well-being" so frequently reported by the patient. Oral activity, comparative freedom from side-effects and flexibility of dosage are other advantages associated with this naturally-occurring, conjugated estrogen. "Premarin" is supplied in tablets of four different potencies and in liquid form.



While sodium estrone sulfate is the principal estrogen in "Premarin," other equine estrogens...estradiol, equilin, equilenin, hippulin...are probably also present in varying amounts as water-soluble conjugates.

**"PREMARIN"**



ESTROGENIC SUBSTANCES (WATER-SOLUBLE)  
also known as CONJUGATED ESTROGENS (equine)

**Ayerst, McKenna & Harrison Limited** 22 East 40th Street, New York 16, New York  
4904

man and destroy the man's eye they shall cut his fingers off."

The material allotted to the various subjects is well proportioned and the organization is good. Enough is written on the methods and instruments used in eye examinations to give the student a mental footing in the specialty. The space devoted to elemental optics, refractive errors and use of corrective lenses is adequate. The important external diseases are concisely described and illustrated, as are intra-ocular conditions. There are chapters on glaucoma, intra-ocular tumors, strabismus and the eye in general disease. The last chapter is devoted to eye injuries, first aid and therapeutics.

This brief text answers a need of the usually not too interested medical student, yet it is adequate enough for the general practitioner who will be able to treat the simple conditions and to recognize those needing the attention of the specialist.

W. R. E.

**PHARMACOLOGY AND ITS APPLICATIONS TO THERAPEUTICS AND TOXICOLOGY, A MANUAL OF.** By Torald Sollmann, M.D., Professor Emeritus of Pharmacology and Materia Medica, School of Medicine, Western Reserve University, Cleveland. Seventh Edition. Philadelphia and London. W. B. Saunders Company. 1948. Price \$11.50.

The seventh edition of this standard textbook gives full and adequate consideration to the older, pioneer drugs as well as to those of newer and more active interest. This comprehensive coverage is made especially attractive by the new arrangement of type in two col-

umns to the page and the inclusion in smaller type but as part of the text, of the less important material. This does away with the awkward footnote convention and facilitates a smooth and undisturbed perusal. An extensive bibliography covering the literature of the last twenty years and an excellent index occupy the final 150 pages of the attractive volume.

In addition to the entirely new antibiotic drugs and the scarcely less recent sulfonamides, a host of other new agents are included in this volume. The antithyroid drugs, anticoagulants, antihistamine agents, folic acid, "nitrogen mustards" and BAL have broadened therapeutic concepts and given greatly increased power to therapeutic armament. Many of these agents are two edged swords. It is important that the physician understand thoroughly the dangers and contraindications of these powerful drugs as well as their advantages. The author spares no pains in giving a clear understanding of these two phases of the pharmacologic action so that the physician may act with intelligence rather than with blind empiricism. Of particular interest to the physician engaged in industrial medicine are the excellent chapters on the various elements—heavy metals and toxic non-metals. These are assuming ever increasing importance in expanding production; an understanding of their effect upon the human organism is basic to a system of industrial hygiene. In view of the increasing use of gold therapy for arthritis a fuller discussion of technic, dosage and toxic effects would seem warranted. In general, however, the chapters are fully and broadly treated: unsubstantiated or unwarranted claims of therapeutic value are so labelled; a wise discrimination is everywhere evident. This accuracy and dependability should recommend the book most highly both to student and practitioner.

## City View Sanitarium

For the diagnosis and treatment of mental and nervous disorders, alcoholism and drug addictions.

Established in 1907 by the late John W. Stevens, M.D. 52 acres near city. Separate buildings for men and women. Two full time psychiatrists. Electric shock and insulin therapy in selected cases. Occupational therapy. Physiotherapy department. Adequate laboratory facilities.

NASHVILLE, TENNESSEE



## The Mary E. Pogue School

Complete facilities for training Retarded and Epileptic children educationally and socially. Pupils per teacher strictly limited. Excellent educational, physical and occupational therapy programs.

Recreational facilities include riding, group games, selected movies under competent supervision of skilled personnel.

Catalogue on request.

G. H. Marquardt, M.D.    Barclay J. Macgregor  
Medical Director                      Registrar

27 Geneva Road, Wheaton, Illinois  
(Near Chicago)





"Baby Talk for a Good Square Meal"



The introduction of the New Improved Biolac has met with wide professional interest. Made available as a product of the latest and the most modern refinements in manufacturing facilities, this prescription favorite is now better than ever.

**NUTRITIONALLY RELIABLE:** More than ever complete in known nutrients (when vitamin C is added), the New Improved Biolac meets every known nutritional requirement of the infant.

All essential fatty acids — with the volatile fraction held to a minimum — are provided by moderate amounts of especially combined fats.

Vegetable and milk sugars — for more satisfactory absorption — are supplied by Biolac's carbohydrate content. Further carbohydrate supplementation is unnecessary.

In protein content, the New Improved Biolac is significantly higher than that of human milk, yielding small, easily digested curds, less allergenic than those of untreated cow's milk.

Prophylactically high levels of such important mineral factors as iron, calcium and phosphorus are incorporated in the New Improved Biolac, together with vitamins A, B<sub>1</sub>, B<sub>2</sub> and D. Infant caloric requirements, too, are fully met by Biolac's 20 calories per fluid ounce in standard dilution.

**PHYSICALLY IMPROVED:** A higher and more stable degree of emulsification of the New Improved Biolac — thereby facilitating digestion — has been brought about by the utilization of every refinement, and the most modern equipment, known to modern infant food manufacturing.

Preparation for feeding is easily calculated; quickly completed — 1 fl. oz. New Improved Biolac to 1½ fl. oz. water per pound of body weight.

**NOW, BETTER THAN EVER!** The New Improved Biolac can be used interchangeably with the former Biolac which has the same percentage composition of nutritional factors. . . When you prescribe the New Improved Biolac (it costs no more) you may do so with complete confidence. Available only in drugstores, in cans of 13 fl. oz.

**THE BORDEN COMPANY**  
**PRESCRIPTION PRODUCTS DIVISION**  
350 MADISON AVENUE • NEW YORK 17, N. Y.

Write for professional literature

**THE NEW IMPROVED BIOLAC**



**GOSSARD**  
FRONT LACING  
**CORSETS**  
*A complete line of  
sizes and types.*  
*Expert Fitters*  
**THE W.E. ISLE COMPANY**  
1121 GRAND • KANSAS CITY, MO.  
ENTIRE SECOND FLOOR VICTOR 2350

## Mullen Ambulance Company

PRIVATE AMBULANCE  
SERVICE

Local and Distant Trips  
Day or Night

5159 Delmar, ST. LOUIS Forest 1913

The Neurological Hospital,  
2625 The Paseo, Kansas City,  
Missouri. Operated by the Rob-  
inson Clinic, for the care and  
treatment of nervous and men-  
tal patients and associated  
conditions.

## FAITH HOSPITAL

A. J. SIGNORELLI, M.D.,  
*Medical Director*

GOodfellow 6262

2800 N. Taylor, St. Louis, Mo.

## The Norbury Sanatorium

Established 1901—Incorporated—  
Licensed—Jacksonville, Illinois

• ALBERT H. DOLLEAR, B.S., M.D., Superin-  
tendent. FRANK GARM NORBURY, A.M., M.D.,  
Medical Director. SAMUEL N. CLARK, M.D.,  
Physician. HENRY A. DOLLEAR, M.D., Physician.



### Maplecrest

• Pictured above — Restful, congenial home-  
like surroundings are combined with the most  
modern diagnostic and therapeutic equipment.

### Maplewood

• Pictured at left — Most comfortable homes  
for individuals requiring rest, scientific diagnosis  
and treatment. Fireproof construction.



---

FROM SECRETARY OF DEFENSE LOUIS JOHNSON—

# AN URGENT APPEAL TO YOUNG DOCTORS!



*Your personal help is needed to avert a serious threat to our national security!*

By the end of July of this year we will have lost almost one-third of the physicians and dentists now serving with our Armed Forces. Without an increased inflow of such personnel, the shortage will assume even more dangerous proportions by December of this year.

These losses are due to normal expiration of terms of service. The professional men who are leaving the Armed Forces during this critical period are doing so because they have fulfilled their duty-obligations and have earned the right to return to civilian practice.

Without sufficient replacements for these losses, we cannot continue to provide adequate medical and dental care for the almost 1,700,000 service men and women who are the backbone of our nation's defense.

***Normal procurement channels will not provide sufficient replacements!***

To alleviate this critical, impending shortage of professional manpower in the three services, I am urging all physicians and dentists who were trained under wartime A. S. T. P. and V-12 programs under government auspices or who were deferred in order to complete their training at personal expense, and who saw no active service, to volunteer for a two-year tour of active duty, at once!

We have written personally to more than 10,000 of you in the past weeks urging such action. The response to this appeal has not been encouraging, and our Armed Forces move rapidly toward a professional manpower crisis!

Many responses have been negative, but worse—a great number of doctors have not replied. It is urgent that we hear from you immediately!

*We feel certain that you recognize an obligation to your fellow men as well as to your profession in this matter. We are confident that you will fulfill that obligation in the spirit of public service that is a tradition with the physician and dentist.*

There is much to be said for a tour of duty with any of the Armed Forces. You will work and train with leading men of your professions. You will have access to abundant clinical material; have the best medical and dental facilities in which to practice. You will expand your whole concept of life through travel and practice in foreign lands. In many ways, a tour of service will be invaluable to you in later professional life!

*Volunteer now for active duty. You are urged to contact the Office of Secretary of Defense by collect wire immediately, signifying your acceptance and date of availability. Your services are badly needed. Will you offer them?*

*Louis Johnson*

---

## ACCIDENT • HOSPITAL • SICKNESS

**INSURANCE**

For Physicians, Surgeons, Dentists Exclusively



<b>\$5,000.00 accidental death</b>	<b>\$ 8.00</b>
\$25.00 weekly indemnity, accident and sickness quarterly	
<b>\$10,000.00 accidental death</b>	<b>\$16.00</b>
\$50.00 weekly indemnity, accident and sickness quarterly	
<b>\$15,000.00 accidental death</b>	<b>\$24.00</b>
\$75.00 weekly indemnity, accident and sickness quarterly	
<b>\$20,000.00 accidental death</b>	<b>\$32.00</b>
\$100.00 weekly indemnity, accident and sickness quarterly	

Cost has never exceeded amounts shown.

Also Hospital Expense for Members  
Wives and Children85c out of each \$1.00 gross income used for  
members' benefit

INVESTED ASSETS PAID FOR CLAIMS

**\$3,700,000.00** **\$15,700,000.00**

\$200,000.00 deposited with State of Nebraska

for protection of our members.

Disability need not be incurred in line of duty—benefits  
from the beginning day of disability**PHYSICIANS CASUALTY ASSOCIATION**  
**PHYSICIANS HEALTH ASSOCIATION**

47 years under the same management

400 First National Bank Building, OMAHA 2, NEBR.

**All worth while laboratory  
examinations; including—**

Tissue Diagnosis

The Wassermann and Kahn Tests

Blood Chemistry

Bacteriology and Clinical Pathology

X-Ray including Gastro-Intestinal Study and  
Gall Bladder Visualization

Basal Metabolism

Pregnancy Test

Electrocardiograms with interpretation

**National Pathological Laboratory**

RALPH L. THOMPSON, M.D., Director

601-616 University Club Bldg.

ST. LOUIS

Telephone Jefferson 6088

**North Shore  
Health Resort**

Winnetka, Illinois

*on the Shores of  
Lake Michigan*A completely equipped sanitarium for the care of  
*nervous and mental disorders, alcoholism and drug addiction*  
offering all forms of treatment, including electric shock.**SAMUEL LIEBMAN, M.S., M.D.**

225 Sheridan Road

*Medical Director*

Phone Winnetka 211



# IT CAN BE DONE ... but don't try it!

Sometimes it's possible to break all the rules—and get away with it.

The famous Tower of Pisa, for instance, has successfully defied both sound engineering practice and the law of gravity for over 800 years.

But for most of us, most of the time, the rules hold.

That is particularly true when it comes to saving money.

The first rule of successful saving is *regularity* . . . salting away part of every pay check, month after month.

Once in a blue moon, of course, you'll come across someone who can break that rule and get away with it. But the fact is that most of us *cannot*.

For most of us, the one and only way to accumulate a decent-size nest egg for the future and for emergencies is through regular, automatic saving.

In all history there's never been an easier, surer, more profitable way to save regularly than the U. S. Savings Bond way.

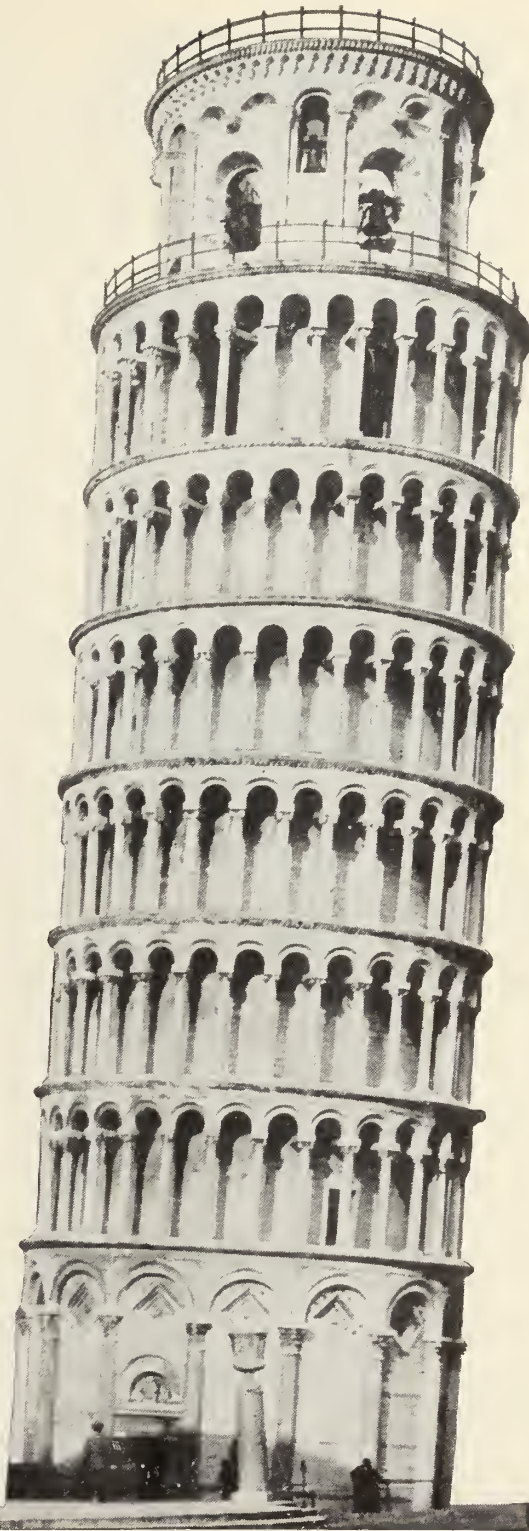
**Those of us on a payroll** are eligible to use the wonderful Payroll Savings Plan. The rest of us can use the equally wonderful Bond-A-Month Plan through our local bank.

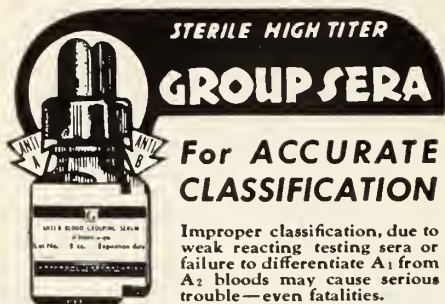
Use whichever is best for you. But—*use one of them!*

**AUTOMATIC SAVING  
IS SURE SAVING—  
U. S. SAVINGS BONDS**



Contributed by this magazine in co-operation with the Magazine Publishers of America as a public Service.





Our Grouping Sera are certified for HIGH TITER. Exclusively prepared under the personal supervision of Dr. R. B. H. Gradwohl for safe, efficient, accurate laboratory technique. We invite your inquiries.

Our sera are manufactured under Government License No. 160, N.I.H. These sera are Anti-A, Anti-B, and Absorbed Anti-A. Absorbed Anti-A serum is to differentiate between A<sub>1</sub> and A<sub>2</sub> bloods. Anti-M and Anti-N sera are used for blood spots and paternity work. Our Anti-Rh serum is manufactured by the Blood Bank of Dade County and must be used with a viewing box.

Write for a sample copy of The Gradwohl Laboratory Digest full of helpful hints on improved laboratory technique.

**GRADWOHL**  
LABORATORIES

R. B. H. Gradwohl, M. D., Director  
3514 Lucas Av. St. Louis, Mo.



## COMPLETE Brace & Truss SERVICE

Complete line of braces and trusses—braces fitted by certified Orthodont—certified truss fitter, graduate of Cincinnati Truss School—lady attendant—individual and personal attention.

**HANGER** ARTIFICIAL LIMBS

1912-14 OLIVE STREET  
ST. LOUIS 3, MO.

### THE STOKES SANITARIUM 923 Cherokee Road, Louisville, Kentucky

Our ALCOHOLIC treatment destroys the craving, restores the appetite and sleep, and rebuilds the physical and nervous condition of the patient. Liquors withdrawn gradually; no limit on the amount necessary to prevent or relieve delirium.

MENTAL patients have every comfort that their home affords.

The DRUG treatment is one of gradual Reduction. It relieves the constipation, restores the appetite and sleep; withdrawal pains are absent. No Hyoscine or rapid withdrawal methods used.

NERVOUS patients are accepted by us for observation and diagnosis as well as treatment.

E. W. STOKES, Medical Director. Established 1904  
Telephone—Highland 2101

Hair Permanently Removed by Electrolysis

**DOROTHY WORRELL, R.N.**

233 Vandeventer, St. Louis

Telephone, Jefferson 9436

Work Done on Prescription of Physicians Only

### INDEX TO ADVERTISERS

Abbott Laboratories .....	571
Ames Company, Inc. ....	560
Ar-Ex Cosmetics, Inc. ....	572
Arlington Chemical Co. ....	568
Ayerst, McKenna & Harrison, Ltd. ....	611
Bilhuber-Knoll Corp. ....	566
Borden Company .....	613
Camel Cigarette .....	569
Camp, S. H., & Co. ....	590
Canada Dry Ginger Ale, Inc. ....	602
City View Sanitarium .....	612
Cook County Graduate School of Medicine.....	602
Cosmo-Cautery Co. ....	607
Duncan Laboratories .....	619
Faith Hospital .....	614
Glenwood Sanatorium .....	568
Gradwohl Laboratories .....	618
Hamilton-Schmidt .....	572
Hanger, J. E., Inc. ....	618
Isle, W. E., Co. ....	614
Lederle Labs. ....	609
Lilly, Eli, & Co. ....	Insert
Major Clinic .....	561
Massachusetts Indemnity Insurance Co. ....	602
Mead Johnson & Co. ....	620
Medical National Defense .....	615
Medical Protective Co. ....	572
Milwaukee Sanitarium .....	607
Mullen Ambulance .....	614
National Pathological Labs. ....	616
Norbury Sanatorium .....	614
North Shore Health Resort .....	616
Parke, Davis & Co. ....	553, 559
Physicians Casualty Assn. ....	616
Pogue, Mary E., School .....	612
Producers Creamery Co. ....	605
Quincy X-Ray & Radium Labs. ....	572
Ralph Sanitarium .....	570
Robinson Clinic, Inc. ....	614
Schering Corporation .....	593
Schmid, Julius, Inc. ....	595
Searle, G. D., & Co. ....	589
Smith-Dorsey Co. ....	601
Stokes Sanitarium .....	618
Swift & Co. ....	599
Upjohn Co. ....	567
U. S. Brewers Foundation, Inc. ....	605
U. S. Savings Bond .....	617
Wallace Sanitarium .....	566
Wander Company .....	565
Winthrop-Stearns, Inc. ....	563
Worrell, Dorothy .....	618



*Your* **LABORATORIES**  
*Our* **RESPONSIBILITY**

CLINICAL PATHOLOGY  
PATHOLOGIC ANATOMY

**DUNCAN LABORATORIES**

*Established 1924*

909 Argyle Bldg. **KANSAS CITY 6, MO.**  
230 Frisco Bldg. **JOPLIN, MISSOURI**

RALPH EMERSON DUNCAN, M.D.

MAURICE L. JONES, M.D.

In addition to diagnostic laboratory services, chemically accurate and clinically tested reagents, solutions, stains and culture media are available for immediate delivery.

# DEXTRI-MALTOSE

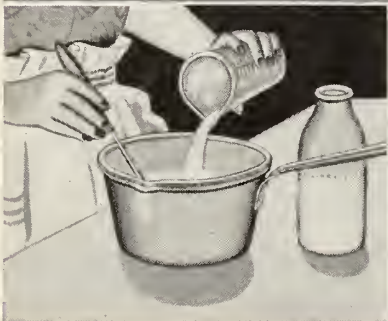

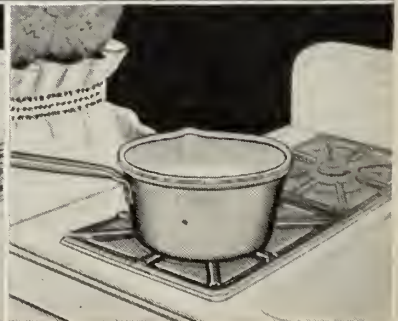
*Simple to use...*

## WITH EVAPORATED MILK

<p><b>1</b> Boil water.</p>	<p><b>2</b> Stir in Dextri-Maltose while water is hot.</p>	<p><b>3</b> Add evaporated milk and stir.</p>
		

OR

## WITH WHOLE MILK

<p><b>1</b> Mix whole milk and water.</p>	<p><b>2</b> Heat until almost boiling and stir in Dextri-Maltose.</p>	<p><b>3</b> Boil gently for three minutes.</p>
		

... FOR 38 YEARS COW'S MILK-DEXTRI-MALTOSE FORMULAS HAVE BEEN EMPLOYED BY PHYSICIANS TO MEET THE VARYING NUTRITIONAL REQUIREMENTS OF SICK AND WELL INFANTS. MEAD JOHNSON & CO., EVANSVILLE 21, IND., U. S. A.



# THE JOURNAL

*of the*  
MISSOURI STATE MEDICAL ASSOCIATION

VOLUME 46  
NUMBER 9

SEPTEMBER, 1949

SINGLE COPY, 40 CENTS  
PER YEAR, \$3.00

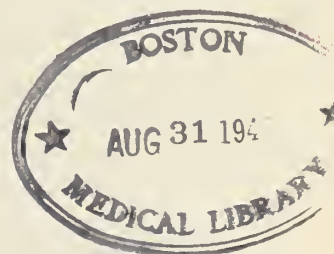
## ORIGINAL ARTICLES

Responsibility of the Physician in the Management of Premature  
Labor and the Early Neonatal Care of the Infant

The Use of Anticoagulants in the Treatment of Diseases of the  
Heart and Blood Vessels With Special Reference  
to Long Term Anticoagulant Therapy

Electrocardiographic Changes in Coronary Artery Disease

The Management of Prostatism



## EDITORIALS

Kansas City Southwest Clinical Society

Taxation

Preventive Medicine and Smallpox

*(Contents Index Page 625)*

# criteria in syphilotherapy MAPHARSEN



PARKE, DA



"Therefore, more than in any other disease, it is necessary in the treatment of an individual patient with syphilis to follow a therapeutic regimen which, after *long-term study in large series of patients*, has been established as *satisfactory* for the particular type of syphilis under consideration."\*

# *an arsenical of choice in the treatment of syphilis*

*long-term study*

more than a decade of clinical evaluation.

*large series of patients*

over two hundred million injections already administered.

*satisfactory*

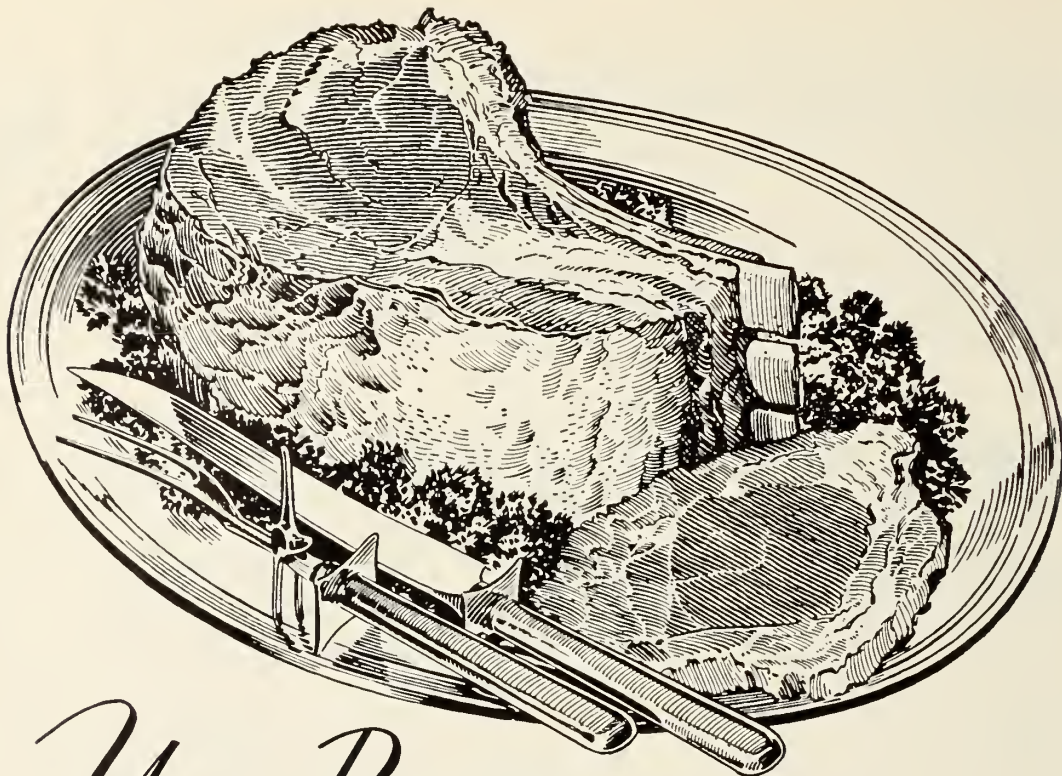
high therapeutic effectiveness with notable safety in causing disappearance of spirochetes, healing of lesions and reversal of seropositivity in a large percentage of cases.

MAPHARSEN (oxophenarsine hydrochloride, P. D. & Co.) is supplied in single dose ampoules of 0.04 Gm. and 0.06 Gm., boxes of 10, and in multiple dose ampoules of 0.6 Gm. in boxes of 10.

\* Cecil, R. A.: A Textbook of Medicine. Philadelphia, W. B. Saunders Co., 1947, p. 376.

COMPANY • DETROIT 32, MICHIGAN





*Your Patients...*

## And the Meat They Eat

The established relationship between sound dietary planning and a state of maintained good health emphasizes the nutritional importance of meat, man's favorite protein food.

Not only does meat taste good, but of greater significance, it provides a host of nutritional benefits. Developments in the field of nutrition\* have proved that complete protein—the kind that meat supplies in abundance—aids in building and maintaining immunity, hastens recovery after acute infectious diseases and following injury and burns, promotes health during pregnancy, aids in the growth and development of husky children, and is needed to maintain everyone in top physical condition.

No matter from what walk of life your patients come, and whether their pocketbooks demand economy or permit satisfaction of that urge for the fanciest cuts, meat gives them full value for their money.



The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

\*McLester, J. S.: Protein Comes Into Its Own, J.A.M.A. 139:897 (April 2) 1949.

**American Meat Institute**  
Main Office, Chicago...Members Throughout the United States



# CONTENTS

Responsibility of the Physician in the Management of Premature Labor and the Early Neonatal Care of the Infant. Frank R. Lock, M.D., and Donald L. Whitener, M.D., Winston-Salem, N. C. ....	637	Editorials—	
The Use of Anticoagulants in the Treatment of Diseases of the Heart and Blood Vessels With Special Reference to Long Term Anticoagulant Therapy. William T. Foley, M.D., New York .....	643	Kansas City Southwest Clinical Society Fall Conference .....	656
Electrocardiographic Changes in Coronary Artery Disease. Paul S. Barker, M.D., Ann Arbor, Mich.	646	Taxation .....	656
The Management of Prostatism. John F. Patton, M.D., St. Louis .....	649	*Preventive Medicine and Smallpox .....	656
President's Page .....	655	News Notes .....	656
		Musings of Field Secretary .....	657
		Deaths .....	657
		Miscellany .....	657
		Society Proceedings .....	664
		Book Reviews .....	664
		Commercial Announcement .....	682

Entered as Second-Class Matter, February 18, 1925, at the Post Office at Fulton, Mo., under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1003, Act of October 3, 1917, authorized July 30, 1918. Business Office, 1201-5 Bluff St., Fulton, Mo., and 623 Missouri Building, St. Louis, Mo., Editorial Office, 623 Missouri Building, St. Louis, Mo. Return postage guaranteed. Printed by The Ovid Bell Press, Inc., Fulton, Mo.

## THE MAJOR CLINIC ASSOCIATION

3100 Euclid Avenue, Kansas City, Missouri

A Well  
Equipped  
Institution  
for the  
Treatment of  
Nervous and  
Mental  
Diseases and  
Alcohol  
Drug and  
Tobacco  
Addictions



Beautiful  
Location  
Large, Well  
Shaded  
Grounds,  
Spacious  
Porches,  
All Modern  
Methods for  
Restoring  
Patients to a  
Normal  
Condition

HERMON S. MAJOR, M.D.  
Medical Director

HERMON S. MAJOR, JR.  
Business Manager

**AMERICAN MEDICAL ASSOCIATION**

President, Ernest Edward Irons, Chicago.  
President-Elect, Elmer L. Henderson, Louisville.

Interim Session, Washington, D. C.,  
December 6-9, 1949

**MISSOURI STATE MEDICAL ASSOCIATION****92nd Annual Session, St. Louis, March 26-29, 1950**

President, Wallis Smith, Springfield.  
President-Elect, W. A. Bloom, Fayette.  
Vice Presidents, J. C. Creech, Troy; E. J. McIntire, Carthage;  
H. M. Henrickson, Poplar Bluff.  
Speaker, F. T. H'Doubler, Springfield; Vice Speaker, Victor E. Scherman, St. Louis.  
Treasurer, C. E. Hyndman, St. Louis.  
Secretary, H. E. Petersen, St. Joseph.  
Editor, R. O. Muether, St. Louis.  
Secretary-Editor Emeritus, R. L. Thompson, St. Louis.  
Field Secretary, Raymond McIntyre, St. Louis.  
Assistant Editor-Business Manager, Helen Penn, St. Louis.  
Executive Secretary, Tom R. O'Brien, 623 Missouri Bldg., St. Louis.

**Delegates to the American Medical Association**

R. E. Schlueter, St. Louis, 1949-51; alternate, F. G. Pernoud, St. Louis. James R. McVay, Kansas City, 1949-1951; alternate, R. B. Wray, Nevada. W. L. Allee, Eldon, 1948-50; alternate, Paul Baldwin, Kennett. Howard B. Goodrich, Hannibal, 1948-1950.

**Standing Committees**

**Scientific Work**—A. N. Arneson, St. Louis, Chairman (1951); Victor B. Buhler, Kansas City (1952); H. E. Petersen, St. Joseph.

**Postgraduate Course**—M. Pinson Neal, Columbia, Chairman (1952); Carl R. Ferris, Kansas City (1952); Raymond O. Muether, St. Louis (1951); Edward Massie, St. Louis (1951); Guy D. Callaway, Springfield (1950). **Associate Members**—W. W. Tillman, Bolivar; Kenneth Glover, Mount Vernon; Paul O. Hagemann, St. Louis; D. L. Sexton, St. Louis.

**Publication**—R. O. Muether, St. Louis, Chairman; V. T. Williams, Kansas City; H. E. Petersen, St. Joseph; M. D. Overholser, Columbia; Paul O. Hagemann, St. Louis.

**Public Policy and Public Relations**—Armand D. Fries, St. Louis, Chairman (1952); J. W. Allee, Columbia (1950); F. R. Crouch, Farmington (1951); Howard B. Goodrich, Hannibal (1951); John Growdon, Kansas City (1950). **Associate Member**—Cyril W. Schumacher, St. Louis.

**Defense**—Charles E. Hyndman, St. Louis, Chairman (1951); Roland S. Kieffer, St. Louis (1950); L. F. Heimbürger, Springfield (1950); O. B. Zeinert, St. Louis (1952); L. P. Forgrave (1952).

**Medical Education and Hospitals**—John S. Knight, Kansas City, Chairman (1951); F. T. H'Doubler, Springfield (1950); O. J. Gibson, Cape Girardeau (1952); D. M. Dowell, Chillicothe (1950); Oliver Abel, St. Louis (1952).

**Cancer**—E. C. Ernst, St. Louis, Chairman (1950); E. Kip Robinson, Kansas City (1951); Everett Sugarbaker, Jefferson City (1951); William E. Leighton, St. Louis (1952); Marvin Napper, Springfield (1952).

**Medical Economics**—Carl F. Vohs, St. Louis, Chairman (1950); Morris S. Harless, Kansas City (1951); C. T. Herbert, Cape Girardeau (1951); G. A. Alken, Marshall (1952); A. P. Rowlette, Moberly (1952).

**Mental Health**—E. F. Hoctor, Farmington, Chairman (1951); Paul Hines, St. Louis (1950); Orr Mullinax, Jefferson City (1950); B. Landis Elliott, Kansas City (1952); Frank M. Grogan, St. Louis (1952).

**Maternal Welfare**—E. Lee Dorsett, St. Louis, Chairman (1952); Leo Hartnett, St. Louis (1952); J. L. Johnston, Springfield (1951); E. E. Wadlow, St. Joseph (1950); J. Milton Singleton, Kansas City (1950).

**Infant Care**—G. V. Herrman, Kansas City, Chairman (1951); Eugene Schwartz, Springfield (1951); H. E. Petersen, St. Joseph (1950); Peter G. Danis, St. Louis (1952); Park J. White, St. Louis (1952). **Associate Members**—Joseph C. Jaudon, St. Louis; Daniel B. Landau, Hannibal.

**Health and Public Instruction (McAlester Foundation)**—A. W. McAlester, III, Kansas City, Chairman (1950); M. K. Underwood, Rolla (1951); B. E. DeTar, Joplin (1951); Joseph Conrad, Chillicothe (1950); J. Earl Smith, St. Louis (1952).

**Constitution and By-Laws**—B. Landis Elliott, Kansas City, Chairman (1950); J. H. Summers, Lebanon (1951); John J. Hammond, St. Louis (1950); W. Logan Allee, Eldon (1952); H. O. Loyd, Jefferson City (1952).

Year indicates expiration of term.

**Fractures**—Daniel L. Yancey, Springfield, Chairman (1952); W. J. Stewart, Columbia (1951); N. S. Pickard, Kansas City (1951); W. R. Bohne, St. Louis (1950); J. Albert Key, St. Louis (1950). **Associate Members**—Jacob Kulowski, St. Joseph; B. L. Murphy, Hannibal.

**Conservation of Eyesight**—C. Souter Smith, Springfield, Chairman (1952); Robert Mattis, St. Louis (1951); A. N. Lemoine, Kansas City (1950); C. P. Dyer, St. Louis (1950); Robert S. Minton, St. Joseph (1952). **Associate Members**—Winifred L. Post, Joplin; Philip Luedde, St. Louis; John McLeod, Kansas City; G. J. Tygett, Cape Girardeau; S. L. Freeman, Kirksville; H. B. Stauffer, Jefferson City; E. D. Tenaglia, St. Louis.

**Control of Venereal Disease**—A. W. Neilson, St. Louis, Chairman (1952); W. S. Sewell, Springfield (1951); Charles Greenberg, St. Joseph (1950); Hugh L. Dwyer, Kansas City (1950); E. M. Cannon, St. Louis (1952).

**Industrial Health**—V. T. Williams, Kansas City, Chairman (1951); Horace F. Flanders, Kansas City (1951); E. M. Fessen-den, St. Louis (1950); A. M. Ziegler, Kansas City (1952); R. A. Suttler, St. Louis (1952). **Associate Members**—R. Emmet Kelly, St. Louis; H. M. Roebber, Bonne Terre.

**Special Committees**

**Physical Medicine**—F. Garrett Pipkin, Kansas City, Chairman (1951); Emmett Settle, Rock Port (1950); Luke A. Knese, St. Louis (1950); A. J. Kotkis, St. Louis (1952); J. L. Washburn, Versailles (1952).

**Tuberculosis**—E. E. Glenn, Springfield, Chairman; Lawrence E. Wood, Kansas City; J. L. Mudd, St. Louis; Paul Murphy, St. Louis; C. A. Brashar, Mount Vernon; W. P. McDonald, St. Joseph; I. J. Flance, St. Louis; Florence E. MacInnis, Kansas City.

**Study of Cardiac Diseases**—A. Graham Asher, Kansas City, Chairman (1952); Drew Luten, St. Louis (1951); A. M. Estes, Jackson (1951); Julius Jensen, St. Louis (1950); Glenn W. Hendren, Liberty (1952). **Associate Members**—Horace W. Carle, St. Joseph; J. W. Fleming, Moberly; C. B. Davis, Nevada; Arthur Strauss, St. Louis; William I. Park, Springfield.

**Rural Medical Service**—R. W. Kennedy, Marshall, Chairman; A. E. Spelman, Smithville; J. W. Well, Palmyra; Martin M. Hart, Salem; R. B. Wray, Nevada.

**COUNCILOR DISTRICTS AND COUNTIES IN EACH DISTRICT\***

J. W. THOMPSON, St. Louis, Chairman

E. C. BOHRER, West Plains, Vice Chairman

**First District:** Councilor, Donald M. Dowell, Chillicothe. Counties: Andrew, Atchison, Buchanan, Caldwell, Carroll, Clay, Clinton, Daviess, De Kalb, Gentry, Grundy, Harrison, Holt, Livingston, Mercer, Nodaway, Platte, Ray, Worth.

**Second District:** Councilor, W. F. Francka, Hannibal. Counties: Adair, Chariton, Clark, Knox, Lewis, Linn, Macon, Marion, Monroe, Pike, Putnam, Ralls, Randolph, Schuyler, Scotland, Shelby, Sullivan.

**Third District:** Councilor, J. William Thompson, St. Louis.

**Fourth District:** Councilor, Otto W. Koch, Clayton. Counties: Franklin, Jefferson, Lincoln, St. Charles, St. Louis County, Warren.

**Fifth District:** Councilor, J. F. Jolley, Mexico. Counties: Audrain, Boone, Callaway, Camden, Cole, Cooper, Gasconade, Howard, Maries, Miller, Moniteau, Montgomery, Morgan, Osage.

**Sixth District:** Councilor, R. W. Kennedy, Marshall. Counties: Bates, Benton, Cass, Cedar, Henry, Johnson, Lafayette, Pettis, St. Clair, Saline, Vernon.

**Seventh District:** Councilor, Edgar C. Virden, Kansas City. County: Jackson.

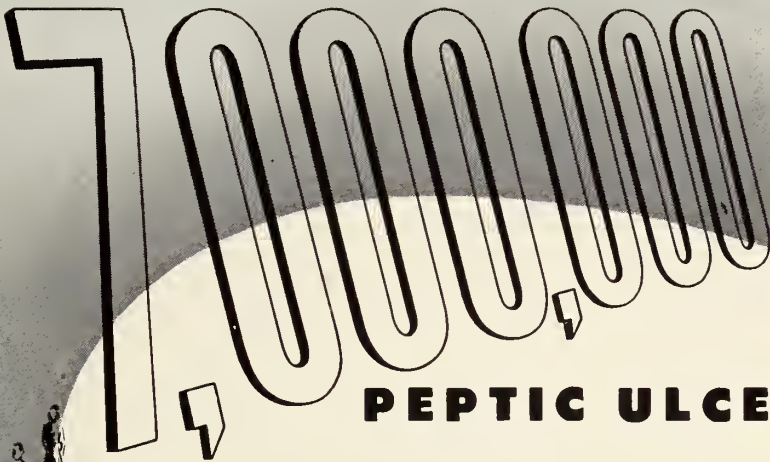
**Eighth District:** Councilor, W. S. Sewell, Springfield. Counties: Barry, Barton, Christian, Dade, Dallas, Greene, Hickory, Jasper, Lawrence, McDonald, Newton, Polk, Stone, Taney, Webster.

**Ninth District:** Councilor, E. Claude Bohrer, West Plains. Counties: Carter, Crawford, Dent, Douglas, Howell, Laclede, Oregon, Ozark, Phelps, Pulaski, Ripley, Shannon, Texas, Wright.

**Tenth District:** Councilor, Frank W. Hall, Cape Girardeau. Counties: Bollinger, Butler, Cape Girardeau, Dunklin, Iron, Madison, Mississippi, New Madrid, Pemiscott, Perry, Reynolds, St. Francois, Ste. Genevieve, Scott, Stoddard, Washington, Wayne.

Counties in italics are not organized.





# 7,000,000

## PEPTIC ULCERS...

**A conservative estimate places  
the incidence of peptic ulcers  
at 5 per cent of the U.S. population\***

The great majority of this vast group of patients need a year-in and year-out program of rest, diet and acid neutralization.

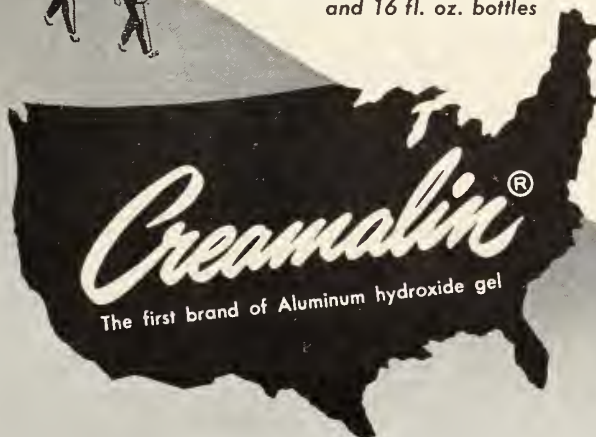
Creamalin, the first aluminum hydroxide gel, readily and safely produces sustained reduction in gastric acidity. With Creamalin there is no compensatory reaction by the gastric mucosa, no acid "rebound," and no risk of alkalosis. Through the formation of a protective coating and a mild astringent effect, nonabsorbable Creamalin soothes the irritated gastric mucosa. Thus it rapidly relieves gastric pain, speeds healing and helps to prevent recurrence.

**AVERAGE DOSE:** 2 to 4 teaspoonfuls  
in  $\frac{1}{2}$  glass of milk or water every  
two to four hours.

Supplied in 8 fl. oz., 12 fl. oz.  
and 16 fl. oz. bottles



**Winthrop-Stearns INC.**  
NEW YORK 13, N. Y. WINDSOR, ONT.



# County Societies in Affiliation with the Missouri State Medical Association

COUNTY	DISTRICT	PRESIDENT	ADDRESS	SECRETARY	ADDRESS
Andrew	1	V. R. Wilson	Rosendale	M. L. Holliday	Fillmore
Audrain	5	Glen P. Kallenbach	Mexico	Fred Griffin	Mexico
Barton-Dade	8	Rudolf Knapp	Golden City	Vern T. Bickel	Lamar
Bates	6	C. J. Allen	Rich Hill	John M. Cooper	Butler
Benton	6	T. S. Reser	Cole Camp	James A. Logan	Warsaw
Boone	5	James Baker	Columbia	Helen Yeager	Columbia
Buchanan	1	O. Earl Whitsell	St. Joseph	Joseph L. Fisher	St. Joseph
Butler	10	Frank E. Dinelli	Poplar Bluff	J. W. McPheeters, Jr.	Poplar Bluff
Caldwell-Livingston	1	Virgil D. Vandiver	Chillicothe	Charles M. Grace	Chillicothe
Callaway	5	R. B. Price	Fulton	R. N. Crews	Fulton
Camden	5	E. G. Claiborne	Camdenton	G. T. Myers	Macks Creek
Cape Girardeau	10	O. J. Gibson	Cape Girardeau	Charles F. Wilson	Cape Girardeau
Carroll	1	J. Morris Atwood	Carrollton	John H. Platz	Carrollton
Carter-Shannon	9	Harry Rollins	Winona	W. T. Eudy	Eminence
Cass	6	Herbert A. Tracy	Belton	O. B. Barger	Harrisonville
Chariton-Macon-Monroe-Randolph	2	D. E. Eggleston	Macon	Henry K. Baker	Moberly
Clay	1	W. H. Goodson	Liberty	S. R. McCracken	Excelsior Springs
Clinton	1	Ronald E. Wilbur	Cameron	F. A. Santner	Lathrop
Cole	5	H. M. Wiley	Jefferson City	J. Paul Leslie	Jefferson City
Cooper	5			J. C. Tinch	Boonville
Dallas Hickory-Polk	8	C. H. Barnett	Bolivar	John R. O'Brien	Bolivar
De Kalb	1			W. S. Gale	Osborn
Dunklin	10	Quinton Tarver	Kennett	E. L. Spence	Kennett
Franklin	4	Herbert H. Schmidt	Marthasville	F. G. Mays	Washington
Greene	8	Daniel L. Yancey	Springfield	Kenneth E. Knabb	Springfield
Grundy-Daviess	1	Joseph M. Quisito	Trenton	E. A. Duffy	Trenton
Harrison	1	Merriam Gearhart	Bethany	W. A. Broyles	Bethany
Henry	6	S. B. Hughes	Clinton	R. S. Hollingsworth	Clinton
Holt	1	F. E. Hogan	Mound City	D. C. Perry	Mound City
Howard	5	Morris Leech	Fayette	Francis D. Dean	Fayette
Jackson	7	Carl R. Ferris	Kansas City	Kenneth E. Cox	Kansas City
Jasper	8	George H. Wood	Carthage	E. H. Hamilton	Joplin
Jefferson	4	Robert H. Donnell	Crystal City	George Hopson	DeSoto
Johnson	6	O. H. Damron	Warrensburg	Reed T. Maxson	Warrensburg
Laclede	9	H. W. Carrington	Lebanon	B. B. Hurst	Lebanon
Lafayette	6	Douglas Kelling	Waverly	Jordan Kelling	Waverly
Lewis-Clark-Scotland	2	J. R. Bridges	Kahoka	P. W. Jennings	Canton
Lincoln	4	H. S. Harris	Troy	J. C. Creech	Troy
Linn	2	Roy R. Haley	Brookfield	J. R. Dixon	Brookfield
Marion-Ralls	2	H. L. Greene	Hannibal	M. J. Roller	Hannibal
Mercer	1	T. S. Duff	Cainsville	J. M. Perry	Princeton
Miller	5			Carl T. Buehler, Jr.	Eldon
Mississippi	10	G. W. Whitaker	East Prairie	E. C. Rolwing	Charleston
Moniteau	5	K. S. Latham	California	L. L. Latham	California
Montgomery	5	E. J. T. Anderson	Montgomery City	S. J. Byland	Wellsville
Morgan	5	A. J. Gunn	Versailles	J. L. Washburn	Versailles
New Madrid	10	L. J. Smith	New Madrid	H. W. Carter	Portageville
Newton	8	H. C. Lentz	Neosho	J. A. Guthrie	Neosho
Nodaway-Atchison-Gentry-Worth	1	Frank H. Rose	Albany	Charles D. Humbert	Barnard
North Central Counties Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam)	2	Spencer L. Freeman	Kirksville	John B. Jones	Kirksville
Ozarks Medical Society (Barry-Lawrence-Stone-Christian-Taney)	8	Fred Wommack	Crane	Kenneth Glover	Mt. Vernon
Pemiscot	10	E. L. Taylor	Steele	C. F. Cain	Caruthersville
Perry	10	J. J. Bredall	Perryville	L. W. Feltz	Perryville
Pettis	6	E. L. Rhodes	Sedalia	Carl D. Siegel	Sedalia
Phelps-Crawford-Dent-Pulaski	9	A. A. Drake	Rolla	M. K. Underwood	Rolla
Pike	2	Eugene Barrymore	Bowling Green	Charles H. Lewellen	Louisiana
Platte	1	L. C. Calvert	Weston	H. Graham Parker	Platte City
Ray	1	L. D. Greene	Richmond		
St. Charles	4	J. M. Jenkins	St. Charles	Calvin Clay	St. Charles
St. Francois-Iron-Madison-Washington-Reynolds	10	George L. Watkins	Farmington	Marvin T. Haw, Jr.	Bonne Terre
Ste. Genevieve	10	A. E. Sexauer	Ste. Genevieve	R. W. Lanning	Ste. Genevieve
St. Louis City	3	J. W. Thompson	St. Louis	S. J. Merenda	St. Louis
St. Louis	4	Paul R. Whitener	St. Louis	Robert C. Kingsland	St. Louis
Saline	6	James A. Reid	Marshall	Charles A. Veatch	Marshall
Scott	10	W. C. Critchlow	Sikeston	W. J. Ferguson	Sikeston
Shelby	2	D. L. Harlan	Clarence		
South Central Counties Medical Societies (Howell-Oregon-Texas-Wright-Douglas)	9	Garrett S. Hogg, Jr.	Cabool	A. C. Ames	Mountain Grove
Stoddard	10	H. A. Harris	Bloomfield	W. C. Dieckman	Dexter
Vernon-Cedar	6	William H. Allen	Nevada	Rolla B. Wray	Nevada
Webster	8	C. R. Macdonnell	Marshfield	E. G. Beers	Seymour



# delayed diagnosis

## is enemy number one of

# DIABETICS

A million or more diabetics are undetected and untreated.† But only about 55,000 new cases are being discovered each year in the course of insurance examinations and routine checkups. Early diagnosis and prompt treatment give the physician his best opportunity to ameliorate the disease and to avert or delay its complications.

### An urgent problem

How shall the unknown diabetic be detected and directed to the doctor's office for diagnosis and proper treatment?

### An important answer

## AMES *Selftester*\*

a quick home screening test that brings those with glycosuria to you for diagnosis

The Ames Selftester for detection of sugar in urine is approved by the Council of the American Diabetes Association. It is a simple, reliable screening test to establish the presence or absence of urine-sugar and "refer" those with glycosuria to you for diagnosis.

#### The directions state:

1. The Selftester does not diagnose diabetes or any other disease. Its sole function is the detection of sugar (glucose) or sugar-like substances.
2. If reaction is positive, see your doctor at once. Sugar in your urine does not necessarily mean you have diabetes (nor does a negative result definitely exclude the presence of disease). But only your doctor, by medical examination and by additional laboratory tests, can tell you why you show sugar.

† Wilkerson, H. L. C. and Krall, L. P.: Diabetes in a New England Town, Journal of the American Medical Association, 135:209 (Sept. 27) 1947.

\*Ames *Selftester*—TRADE MARK



AMES COMPANY, INC. • ELKHART, INDIANA



DRINK  
*Coca-Cola*  
TRADE MARK REG.

You trust  
its quality



## THE WALLACE SANITARIUM

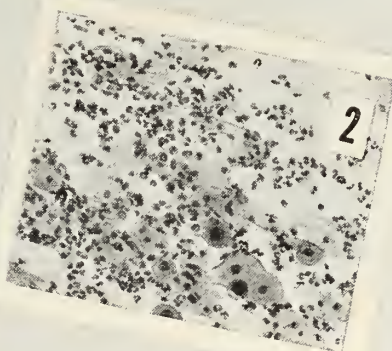
MEMPHIS, TENNESSEE

*For the Diagnosis and Treatment of  
Nervous and Mental Diseases, Drug Addiction and Alcoholism*



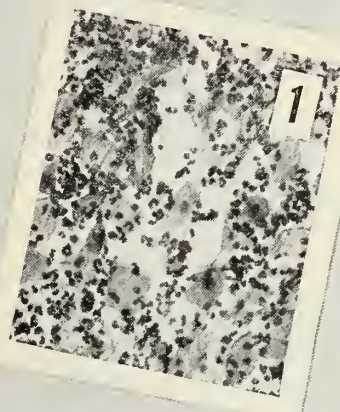
Untreated menopause. Epithelial cells are relatively small, large nuclei predominate; bacteria, leukocytes, free-floating nuclei and other debris cloud the smear picture.

1

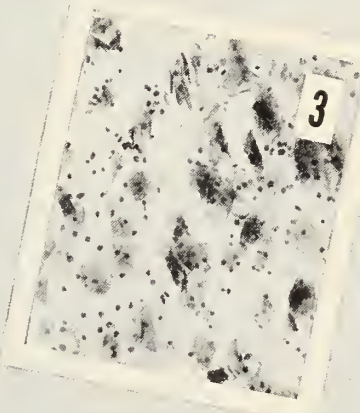


2

2 & 3 Smears showing progressive improvement during estrogen treatment. The picture is beginning to clear. The cells are enlarging and becoming more discrete.



1



3

4 Smear showing effects of full estrogen replacement. The smear is clean and free of leukocytes indicating restoration of a normal vaginal epithelium.

4



## CONESTRON®

ESTROGENIC  
SUBSTANCES  
WATER-SOLUBLE

CONJUGATED  
ESTROGENS

(EQUINE)

For action with little or no side action in control of menopause and certain other ovarian disorders.

CONESTRON, a complex of estrone, estradiol, equilin, equilinenin and hippulin in the physiological conjugate obtained from the pregnant mare, supplies estrogens from natural sources, in the original, orally active form.

Conestron therapy produces a sense of well-being and is almost completely devoid of side reactions. Given in small, frequent, oral doses, Conestron permits a more uniform rate of absorption and maintains an effective level of blood estrogens.

Tablets of 0.625 and 1.25 mg., expressed as estrone sulfate. Bottles of 100 and 1000.



WYETH INCORPORATED, PHILADELPHIA 3, PA.



One of Four Main Buildings

## GLENWOOD SANATORIUM

A Private Hospital for Care of Nervous and Mental Disorders, Alcohol and Narcotic Addictions.

Thoroughly equipped for all the approved therapeutic measures. Insulin, metrazol and electro shock used in selected cases.

Four main buildings for patients permit ample classification facilities. Large grounds composed of about fifty acres make many out-of-door activities possible.

Phone WEBster 1056

*For full information, address*

GLENWOOD SANATORIUM, Webster Groves, St. Louis 19, Mo.

## SPECIFIC DESENSITIZATION is the aim in Ragweed Pollinosis..

The antihistaminic drugs "do not replace the more lasting benefit obtainable by successful specific . . . desensitization."

Feinberg, S. M.: *Postgrad. Med.* 3: 92 (1948).

"Apparently, desensitization treatment is still the method of choice, and the antihistaminic drugs cannot be considered as substitutes."

Levin, L.; Kelly, J. F., and Schwartz, E.: *New York State J. Med.* 48: 1474 (1948).

The antihistaminic drugs "are valuable additions to our armamentarium, but do not . . . supplant the specific desensitizing injections."

Brown, G. T.: *M. Ann. District of Columbia* 16:675 (1947).

Pollen desensitization "still remains the treatment of choice in hay fever."

Rosen, F. L.: *J. M. Soc. New Jersey* 45: 390 (1948).

### DIAGNOSTIC AND TREATMENT SETS

**State Pollen Diagnostic Sets (\$7.50):** Dry pollen allergens selected according to state; 1 viol house-dust allergen. Material for 30 tests in each viol.

**Stock Treatment Sets (\$7.50):** Each consisting of a series of dilutions of pollen extracts for hypsensitization, with accompanying dosage schedule. Single pollens or a choice of 21 different mixtures. Five 3-cc. viols in each set—1:10,000, 1:5,000, 1:1,000, 1:500, and 1:100 concentrations.

### Special Mixture Treatment Sets (\$10.00)

Mixtures of pollen extracts specially prepared according to the patient's individual sensitivities. Ten days' processing time required.

Arlington offers a full line of potent, carefully prepared, and properly preserved allergenic extracts for diagnosis and treatment—pollens, foods, epidermals, fungi, and incidentals.

*Literature to physicians on request.*

*Arlington*

**THE ARLINGTON CHEMICAL COMPANY**  
YONKERS 1, NEW YORK



## 30-DAY TEST REVEALED

*“Not one single case of  
throat irritation due to  
smoking CAMELS!”*



Yes, that's what throat specialists reported after making weekly examinations of the throats of hundreds of men and women from coast to coast who smoked Camels, and only Camels, for 30 consecutive days.



R. J. Reynolds  
Tobacco Co.,  
Winston-Salem,  
N. C.

*According to a Nationwide survey:*

*More Doctors Smoke CAMELS  
than any other cigarette*

Doctors smoke for pleasure, too! When three leading independent research organizations asked 113,597 doctors what cigarette they smoked, the brand named most was Camel!

# 50 and 2

## YEARS TREATING ALCOHOL AND DRUG ADDICTION

In 1897 Doctor B. B. Ralph developed methods of treating alcohol and narcotic addiction that, by the standards of the time, were conspicuous for success.

Twenty-five years ago experience had bettered the methods. Today with the advantages of collateral medicine, treatment is markedly further improved.

The Ralph Sanitarium provides personalized care in a quiet, homelike atmosphere. Dietetics, hydrotherapy and massage speed physical and emotional re-education. Co-operation with referring physicians. Write or phone.

*The*  
**RALPH**  
**SANITARIUM**  
*Established 1897*

Ralph Emerson Duncan, M.D.  
DIRECTOR

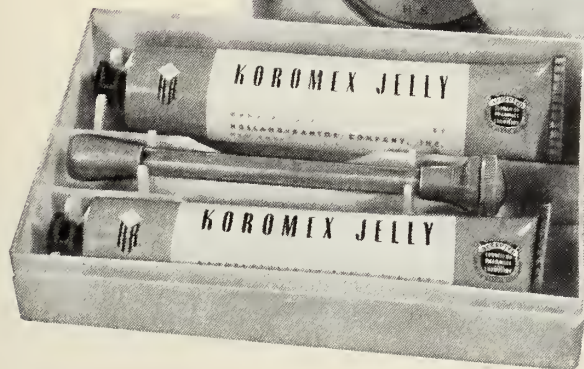
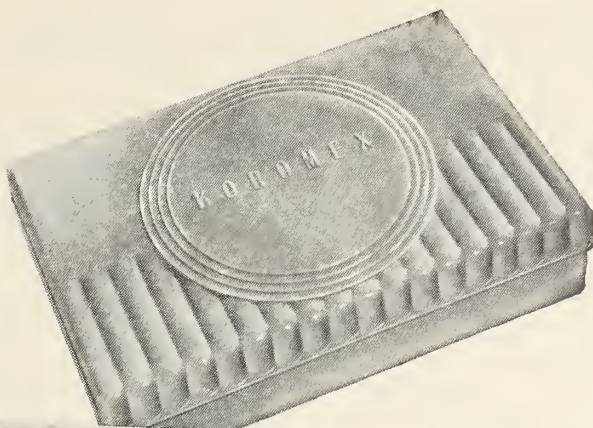


**529 HIGHLAND AVENUE • KANSAS CITY 6, MISSOURI**

Telephone Victor 3624



INTRODUCING...

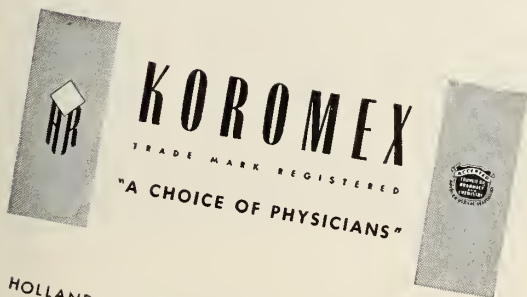


## THE KOROMEX JELLY REFILLABLE UNIT

Physicians acclaim the new Koromex all inclusive contraceptive unit. This fine container is ivory-colored plastic, permanent, dust-proof, attractive for home use and ideal for traveling. It contains two regular size tubes of Koromex Jelly which rest in individual compartments... a Koromex Diaphragm stored in the ingeniously constructed cover compartment... and a Koromex Measured Dose Plunger Applicator that rests securely on its own rack.

Where pregnancy is contra-indicated, recommend the complete Koromex Jelly Refillable Unit to your discriminating women patients. For those of your patients who require a slightly less lubricating but equally effective spermicidal preparation, a similar companion package containing two tubes of Koromex Cream instead of Koromex Jelly is also available.

ACTIVE INGREDIENTS: BORIC ACID 2.0% OXYQUINOLIN BENZOATE 0.02% AND PHENYL MERCURIC ACETATE 0.02% IN SUITABLE JELLY OR CREAM BASES.



"A CHOICE OF PHYSICIANS"

HOLLAND-RANTOS COMPANY, INC., 145 HUDSON STREET, NEW YORK 13, N. Y.  
MERLE L. YOUNGS • PRESIDENT

**Zemmer**  
**PHARMACEUTICALS**

A complete line of laboratory  
 controlled ethical pharmaceuticals.  
*Chemists to the Medical Profession for 44 years.*  
 Mo. 9-49 **The Zemmer Company**  
 Oakland Station • PITTSBURGH 13, PA.

**RADIUM** (including Radium Applicators) FOR ALL MEDICAL PURPOSES  
*Est. 1919*

**QUINCY X-RAY & RADIUM LABORATORIES**

(owned and directed by a Physician-Radiologist)

W. C. U. Bldg.

HAROLD SWANBERG, B.S., M.D., Director

QUINCY, ILLINOIS

**HAMILTON-SCHMIDT SURGICAL COMPANY**

*St. Louis, Missouri*

[[ Surgical Instruments, Invalid and Sick Room Supplies ]]  
 [[ Post-Operative Belts, Elastic Hosiery and Trusses Fitted ]]

CEntral 1680

REGISTERED NURSE IN ATTENDANCE 215 North Tenth Street

*for Fifty Years*

**PROFESSIONAL PROTECTION**

**EXCLUSIVELY**

**THE**  
**MEDICAL PROTECTIVE COMPANY**  
**FORT WAYNE, INDIANA**

ST. LOUIS Office: A. W. Breckenkamp, Representative, 623 Missouri Theatre Building, Telephone Newstead 0404



# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies  
Issued Monthly under direction of the Publication Committee

COPYRIGHTED, 1949, BY MISSOURI STATE MEDICAL ASSOCIATION. ALL RIGHTS RESERVED.

VOLUME 46

SEPTEMBER, 1949

NUMBER 9

R. O. MUETHER, M.D., Editor  
HELEN PENN, Assistant Editor  
623 Missouri Bldg., St. Louis, Mo. Telephone, Newstead 0404-05

PUBLICATION  
COMMITTEE { R. O. MUETHER, M.D., Chairman  
V. T. WILLIAMS, M.D.  
H. E. PETERSEN, M.D.  
PAUL O. HAGEMANN, M.D.  
M. D. OVERHOLSER, M.D.

### RESPONSIBILITY OF THE PHYSICIAN IN THE MANAGEMENT OF PREMATURE LABOR AND THE EARLY NEONATAL CARE OF THE INFANT

AN ANALYSIS OF THREE HUNDRED CONSECUTIVE PREMATURE LABORS

FRANK R. LOCK, M.D., *Winston-Salem, N. C.*,  
AND  
DONALD L. WHITENER, M.D., *Winston-Salem, N. C.*

IT IS GENERALLY agreed that all babies weighing less than 2,500 grams, or 5.5 pounds, represent premature delivery. In recent years, there has been increasing interest in the fate of the premature infant. The advances in the technics of pediatric care have increased greatly the likelihood of survival for a premature infant. More physicians are trained for the correct medical supervision of these small babies. Well trained obstetric-pediatric nurses, better equipment, and better sources of food are leading to good results after the time of delivery. However, there is great loss of infant lives occurring during the first twenty-four hours; approximately one half of all fatalities in the neonatal period are the result of prematurity. One can expect premature infants as a result of roughly 6 per cent of deliveries. In the North Carolina Baptist Hospital 1,131 live births occurred during 1948. There were eighteen neonatal deaths, or a gross neonatal mortality rate of 1.58 per cent. Fourteen of the eighteen infants which died in the neonatal period were premature babies. Seventy-eight per cent of the neonatal infant deaths, therefore, occurred in premature infants. It is apparent that the total infant mortality figure can be improved if results with the premature group can be improved. For this reason, a study was begun of our results in the

last five years to determine whether or not the factors contributing to a poor result might be corrected.

It is generally known that labor must be induced or pregnancy otherwise terminated in the presence of certain complications which are a threat to the life of the mother. Little is known concerning the pathogenesis of spontaneous premature labor and delivery. None of the theories for the cause of the onset of labor at term are fully acceptable, but specific factors such as multiple pregnancy, hydramnios and trauma to the mother are generally accepted as causes of premature labor.

Obstetric complications (table 1) are common in relation to premature labor. However, it is difficult

Table 1. *Complications in 300 Premature Labors*

Ruptured membranes .....	84
Toxemia .....	53
Hemorrhage .....	58
Congenital anomalies .....	18
Syphilis .....	3
Uncomplicated labor .....	102
Total .....	318

to assign the specific cause of prematurity to the complication which was present, except in those cases requiring the operative termination of pregnancy for the treatment of the complication. Anderson and Lyon<sup>1</sup> reviewed the literature on the causes of prematurity and found the frequency with which investigators could assign definite causes for their premature labors ranged between 7.2 and 80.2 per cent. Many authors have over-

Presented at the 91st Annual Session, Missouri State Medical Association, Kansas City, March 27-30, 1949.

From the Department of Obstetrics and Gynecology of Bowman Gray School of Medicine and the North Carolina Baptist Hospital, Winston-Salem, N. C.

looked the fact that the association of premature labor with some disease does not necessarily incriminate that disease as the causative agent.

The onset of premature labor in the absence of maternal complication was present in 102 cases in this series. No reasonable factor of any significance could be educed from a careful study of these records.

Spontaneous premature rupture of the membranes, followed by the onset of labor, was present in eighty-four cases. Some evidence in favor of a hormonal factor in this condition has been offered by Smith, Smith and Hurwitz,<sup>2</sup> but no direct relationship has been proven. In general, this accident must be considered nonpreventable until the exact cause for it is known.

In the present series, toxemia of pregnancy and obstetric hemorrhage due to placenta previa and separation of the placenta were present in more than one third of the cases. A definite effect of these complications upon the child is present in the series. Eastman<sup>3</sup> and Beck<sup>4</sup> have pointed out the frequency with which the condition of a baby is seriously affected when the mother is in poor condition as a result of an obstetric complication, or by treatment directed toward correction of the maternal complication.

It is significant that Beck found congenital anomalies in 32.6 per cent of all babies dying in the early neonatal period. Congenital anomalies were observed in 6 per cent of the living premature babies, as compared to a 1.3 per cent incidence among all live births in the North Carolina Baptist Hospital (1948).

In one case, untreated syphilis was associated with premature delivery. Latent syphilis apparently was not significant in two additional cases.

In this series, 33 of the 168 multiparae had previously delivered one or more premature infants, an incidence of 19.6 per cent, indicating a strong tendency for premature labor to recur in subsequent pregnancies.

A discussion of the social, economic and dietary influences is beyond the scope of this paper. No racial influence is present since all of the patients were of the white race. Eastman and others have shown the importance of good prenatal care in relation to the incidence of premature labor and delivery. One hundred seventy patients of the present series had premature labors in spite of excellent prenatal supervision. Little or no care had been obtained by the remaining one hundred thirty patients, and toxemia occurred primarily in this group.

#### MATERIAL

Three hundred consecutive premature labors occurred in the five year period from January 1, 1944, to December 31, 1948. Only labors which terminated in the delivery of a living child were used in this analysis. Three hundred and twenty-four living infants weighing between 454 grams (1 pound) and 2,499 grams (5.5 pounds) were included in the se-

ries. For the study, the babies were considered in groups representing 227 grams ( $\frac{1}{2}$  pound) increments in weight at the time of delivery. Twenty-four twin pregnancies resulted in the delivery of premature infants. Labors in which intrapartum death of the fetus and delivery of a stillborn infant occurred were not included in the analysis. This represents a separate problem in our experience although correctable factors also may be present. Infants weighing less than 454 grams (1 pound) have an almost hopeless prognosis regardless of the delicacy of the care they are given and, therefore, were eliminated from this series.

#### GENERAL ANALYSIS

*Condition of Baby.*—In the first general review of the material (table 2), it was apparent that a direct relationship existed between the condition of

Table 2. Mortality

	Number Infants	Total Deaths	Gross Mortality	Nonpre- vent- able Deaths	Preven- table Deaths	Corrected Mortality
Good Condition—						
Under 4 lbs.	58	13	22.4%	3	10	17.2%
Over 4 lbs.	201	6	3.0%	3	3	1.5%
Total	259	19	7.3%	6	13	5.0%
Poor Condition—						
Under 4 lbs.	48	41	85.4%	15	26	54.2%
Over 4 lbs.	17	6	35.3%	2	4	23.5%
Total	65	47	72.3%	17	30	46.2%
Total	324	66	20.4%	23	43	13.3%

the baby at the time of delivery and its chance for survival. The gross mortality was 20.6 per cent, representing sixty-six deaths among the three hundred and twenty-four babies living at the time of delivery. Sixty-five of the premature babies were in poor condition at the time of their delivery and of this group, forty-seven babies died (72.3 per cent). Two hundred fifty-nine of the babies were in good condition at the time of delivery. Nineteen of these babies died (7.3 per cent).

In reviewing the cause of death in each group, (table 3), a number of nonpreventable deaths from

Table 3. Causes of Death

	Good Condition at Birth		Poor Condition at Birth		Total
	Over 4 lbs.	Under 4 lbs.	Over 4 lbs.	Under 4 lbs.	
Congenital anomalies	1	2	2	0	5
Intracranial hemorrhage	0	2	0	5	7
Pneumonia (aspiration)	3	1	1	0	5
Diarrhea	1	1	0	0	2
Erythroblastosis	1	0	0	0	1
Syphilis	0	0	0	1	1
No Demonstrable Pathology (Atelectasis)	0 (0)	7 (2)	3 (3)	20 (7)	30 (12)
Prematurity (Weight under 1,000 gms.)	0	0	0	15	15
Total	6	13	6	41	66

the point of view of obstetric management were found. Congenital anomalies not compatible with survival of the infant, diarrhea late in the neonatal period, erythroblastosis and infants weighing less



than 1,000 grams accounted for twenty-three deaths in the two groups. In the final analysis, the mortality for babies in good condition at the time of delivery was 7.3 per cent, while six of these babies died from nonpreventable pathology. By contrast, seventeen of the forty-seven deaths occurring in babies in poor condition were nonpreventable, while 46.2 per cent of the deaths remained in which no explanation could be made except defective obstetric management.

**Size of Baby.**—It is obvious that the chance of survival of a premature baby is directly influenced by the size of the baby. A progressive increase in the per cent of the premature babies which ultimately survive is shown with 20.7 per cent of twenty-nine babies weighing less than 2½ pounds (1,132 grams) surviving, whereas 99 per cent of the eighty-eight infants weighing between 5 and 5½ pounds (2,265 to 2,499 grams) survived.

The estimated duration of pregnancy based upon the last recorded menstrual period, the time of appearance of fetal movement and the observation of the presence of the fetal heart were unreliable indications of the probable size of the baby. Viable and healthy babies were delivered of patients who were estimated to be in the twenty-third week of pregnancy according to all of the usual methods of calculation. On the other hand, premature babies by weight were delivered of patients who were estimated to be as late as the forty-third week of pregnancy. The estimated duration of pregnancy for the twenty-nine babies weighing less than 1,132 grams were between the extremes of twenty-three and forty-one weeks. The average duration of pregnancy for this group of patients was twenty-eight weeks. On the other hand, in eleven cases, babies weighing less than 4 pounds were delivered in pregnancies estimated to be between thirty-eight and forty weeks in duration. The majority of the babies weighed approximately what one would expect from the estimated duration of pregnancy.

**Major Factors Influencing Ultimate Survival of the Premature Infant.**—Since 95 per cent of the babies which were in good condition at the time of their delivery survived the neonatal period (figure 1), and were discharged from the hospital within the limits of mature weight and in good condition, a special analysis was made concerning the factors which determined the condition of the baby at the time of delivery.

For the purpose of this analysis a baby was classified as being in good condition if four of the five following criteria were present:

1. Spontaneous breathing within one minute after the time of delivery.
2. Spontaneous crying within three minutes of delivery.
3. Resuscitative efforts were limited to the aspiration of mucus and other material from the mouth and nasopharynx.
4. The color was pink.
5. Active voluntary movements were present with good muscle tone.

On the other hand, when two or more of the following features were present, the baby was classified as being in poor condition:

1. A delay of spontaneous respiration beyond one minute.
2. Absence of spontaneous crying or the presence of an abnormal cry.
3. Resuscitation or artificial stimulation necessary to establish respiration.
4. Clinical cyanosis or pallor in the baby.
5. Poor muscle tone or absence of voluntary movement.

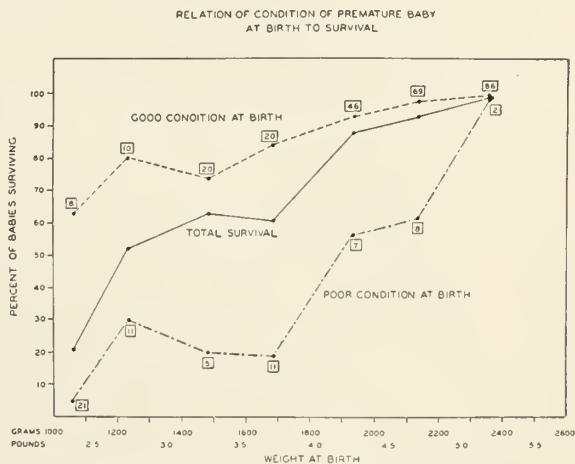


Fig. 1. Relation of condition of premature baby at birth to survival.

In studying the records, it is readily apparent that the chance of survival of a baby weighing 4 pounds or more is excellent if reasonable precautions are used for management of the labor and early neonatal care of the infant. On the other hand, babies weighing less than 4 pounds are extremely susceptible to the various factors influencing the condition of the baby at the time of delivery and provide a group in which the effect of an individual factor is easily shown. The records were analyzed to select the factors which could be controlled by the physician in the management of labor and delivery, with the conclusion that three major influences directly affect the condition of the baby and prognosis for ultimate survival. These factors are the analgesic and anesthetic agents used for the conduct of labor and delivery, the method of delivery and the immediate neonatal care of the infant.

**Analgesia and Anesthesia.**—It is impossible to separate the individual effect of the various anesthetic and analgesic agents in this series of patients since combinations of agents were used in practically every case (figure 2). However, the relative importance of the usual combinations of analgesic and anesthetic drugs can be determined from the records. A comparative figure can be obtained for the babies delivered under local and regional anesthesia as contrasted to those for whom a general anesthetic agent was used. The patients who were given

no anesthetic at the time of delivery are included in the group which received a regional anesthetic in the form of local infiltration, spinal saddle block anesthesia and caudal anesthesia. The former group was quite small, and the result was identical in our opinion.

The general anesthetic was predominantly ether inhalation anesthesia. Those babies delivered with inhalation of ethylene or cyclopropane or with

0.4 mg. (1/150 grain) or a combination of only two of these drugs between the sixth and eighth hour prior to delivery.

3. Heavy analgesia was used for the classification of the labors in which larger doses of the drugs were used, two or more analgesic drugs were administered or analgesics were given within six hours of the time of the patient's delivery.

A graphic analysis of the effect of various combinations of analgesic and anesthetic agents is shown in figure 2. The babies were divided into two major groups consisting of those weighing more than 4 pounds and those weighing less than 4 pounds at the time of delivery. The distribution of the babies of various sizes within the groups is evenly divided in each major classification with the exception of some tendency for heavier analgesia and general anesthesia to be used in labors resulting in the delivery of larger babies. It is clear that babies weighing more than 4 pounds can be delivered with excellent results if regional anesthesia is used or if moderate analgesia is combined with general anesthesia. A considerable number of the larger babies delivered with no analgesia but with general

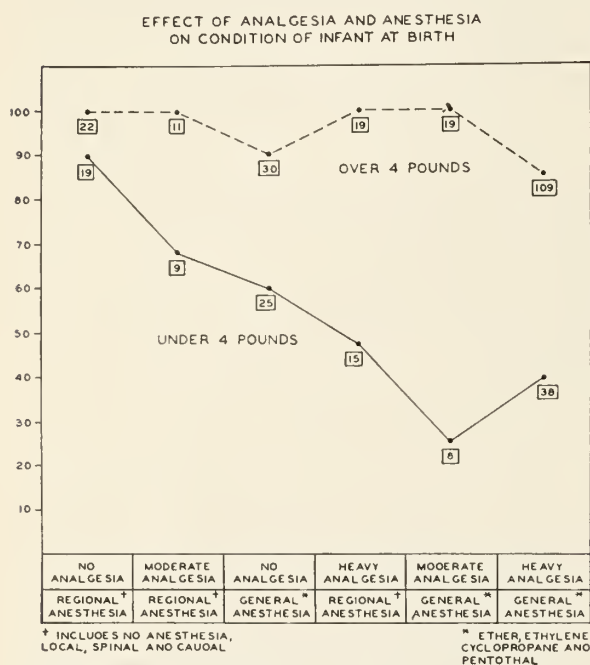


Fig. 2. Effect of analgesia and anesthesia on condition of infant at birth.

pentothal sodium intravenously were included in the group delivered under general anesthesia.

The generally popular analgesic agents including potent barbiturates (nembutal, sodium amytal, seconal and sodium delvinal) demerol, morphine and hyoscine hydrobromide usually are administered in varying dosage in the conduct of labor by the attending staff of the North Carolina Baptist Hospital. In order to draw conclusions concerning the effect of the analgesic agent, an individual analysis was made which showed that the total dosage of the drug and the time of its administration in relation to the time of delivery was of much greater importance than the agent which was used. For this reason analgesia was estimated upon a basis of the total dosage and time of administration in relation to the time of delivery as follows:

1. No analgesia of significance was considered to have been used if a moderate dose of one or more of the standard analgesic agents was given more than eight hours prior to the delivery of the child, or if no analgesic was administered.

2. A patient was classified as receiving moderate analgesia when they received either morphine 10 mg. (1/6 grain), demerol 100 mg., potent barbiturate 98 mg. (1.5 grains), hyoscine hydrobromide

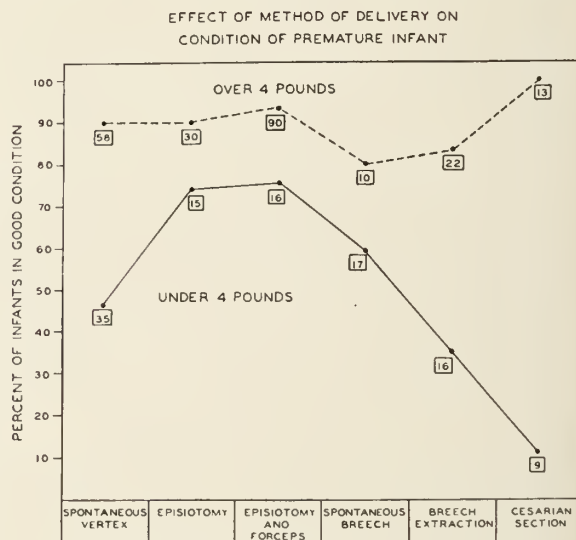


Fig. 3. Effect of method of delivery on condition of premature infant.

anesthesia had rapid or precipitant labors which in part accounts for a poorer result in this group.

A distinct adverse effect upon the condition of the baby is shown in the large group who receive heavy analgesia and general anesthesia for the conduct of labor and delivery. The distinct effect upon the condition of the baby is indicated by the condition of the babies weighing less than 4 pounds. Ninety per cent of the group of small babies delivered with no analgesia and regional anesthesia were in good condition at the time of their delivery. Increasing amounts of analgesia and the use of general anesthesia resulted in a progressive decrease in the number of babies in good condition. Only 40 per cent of the smaller babies were in good condition



when a combination of heavy analgesia and general anesthesia was used. Of fifteen babies which were delivered with heavy analgesia and regional or no anesthesia, only seven were in good condition. Eight babies in this group were in poor condition because heavy sedation was used in an attempt to stop labor and no anesthetic was added when it was apparent that this treatment was unsuccessful.

**Method of Delivery.**—In the analysis of the various methods used for the delivery of this series of premature infants (figure 3), a distinct difference was found in the effect of a given method of delivery upon the condition of the premature baby weighing more than 4 pounds as compared to the group of babies weighing less than 4 pounds at the time of delivery. Little difference was noted in the effect of the various methods of delivery upon larger babies in a cephalic presentation. The poorer result with breech presentation would be expected. All of the babies weighing more than 4 pounds who were delivered by cesarean section were in good condition.

The babies weighing less than 4 pounds show the salutary effect of the use of episiotomy to spare the fetal head the pressure of the musculature of the pelvic outlet. Poor results were obtained in the group of babies which were delivered from breech presentation. However, the value of permitting spontaneous expulsion of the infant presenting by breech presentation is shown by a difference of 25 per cent in the babies in good condition after this method of delivery as compared to those delivered by breech extraction. All nine of the babies under 4 pounds which were delivered by cesarean section expired.

It is true that cesarean section was elected for the delivery of small babies when a serious maternal complication was present and often the mother was in poor condition. However, this result strengthens our opinion that cesarean section should be used strictly for a maternal indication and not in the interest of the baby when a small premature infant will be delivered as a result of the operation.

**Immediate Postnatal Care of the Premature Infant.**—The vast majority of the premature infants received good care in the immediate neonatal period according to the standards of the hospital. The ill effect of poor postnatal care is suggested by our study (figure 4), although the latter group is too small to be of statistical significance. Good postnatal care was a major factor in the survival of six of the fifteen babies weighing less than 2½ pounds (1,132 grams). Thirteen of sixteen babies weighing between 3 and 3½ pounds survived when good postnatal care was given in comparison to one survival in four babies of similar weight who did not receive the benefit of good immediate care.

According to our standards, good immediate care includes:

1. Aspiration of mucus and other material from

the mouth and nasopharynx as soon as the nose and mouth are exposed.

2. Maintenance of body warmth by placing the baby in a heated crib not more than one minute after delivery.

3. Administration of pure oxygen to the baby with an open mask within one minute of the time of delivery.

4. Avoidance of all unnecessary trauma or handling of the baby.

The cord is not tied until the temperature and respiration have been stabilized in an incubator and the color and vigor of the baby are good. We consider the maintenance of bodily warmth of major importance in the early management of the

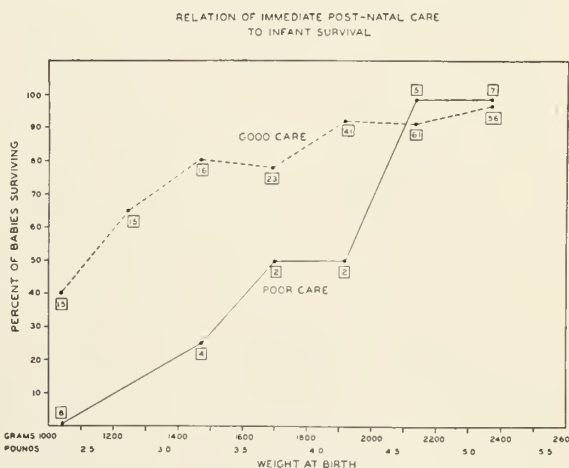


Fig. 4. Relation of immediate postnatal care to infant survival.

premature infant, and the cord is cut before pulsations cease unless it is long enough to permit the infant to be placed in a heated crib with the cord intact.

A baby was considered to have poor care if there was a delay in clearing the respiratory passages and placing the child in a heated crib, omission of the administration of 100 per cent oxygen, unnecessary handling or any forceful resuscitation or trauma to stimulate respiration.

#### DISCUSSION

The estimated duration of pregnancy is of much less importance than the clinical estimation of the size of the baby in the decisions which must be made concerning the management of a patient in labor. Failure to observe special premature precautions in the management of labor for a patient who was presumed to be at term and the administration of large doses of opiates and other sedatives and analgesic drugs in an attempt to stop labor for patients who were presumed by calculation to have a previable pregnancy, led to the delivery of babies in poor condition which might otherwise have survived.

**Management of Complications of Pregnancy in the Interest of the Premature Infant.**—Premature

rupture of the membranes is a common complication of pregnancy. No intervention should be attempted in these cases. There is little likelihood of intrapartum infection if the patient is not subjected to pelvic examinations or other manipulations. In this series the patient was placed at bed rest in the hospital when rupture of the membranes occurred; in a considerable number, a latent period of one or more weeks before the onset of labor permitted additional fetal development which improved the prognosis for survival. In one case a three week interval between the time of spontaneous rupture of the membranes and the onset of labor was observed.

The patients who present the problem of obstetric hemorrhage often require prompt delivery. However, in the cases who have mild vaginal bleeding, a conservative policy may often be followed with safety when the patient can be maintained under hospital supervision. Valuable weeks often are gained in which further maturation of the infant will occur. The administration of adequate quantities of whole blood by transfusion and other fluids to avoid and correct maternal shock resulting from obstetric hemorrhage is of inestimable value to the child.

In the management of toxemia of pregnancy, the interruption of pregnancy is often necessary. Intervention should be deferred until the mother is in the best possible condition as a result of conservative therapy. It is customary to use sedation in the management of toxemia of pregnancy. When the condition of the mother will permit withdrawal of the general sedation or a reduction of the quantity administered, this should be done before induction of labor or termination of the pregnancy. Maintenance of the chemical and fluid balance, and of a satisfactory urinary output is of material value to the baby.

*Management of Labor and Delivery in the Interest of the Premature Infant.*—The best result in the management of premature labor and delivery are obtained when no analgesic or sedative drugs are used and local or regional analgesia and anesthesia are given for the delivery.

Vitamin K should be administered intravenously as soon as possible and repeated every four hours during labor.

The maintenance of excellent hydration and avoidance of dehydration is of sufficient value to warrant the routine administration of intravenous glucose solution in the course of premature labor. Since the fetal oxygenation is directly dependent upon the oxygenation of the maternal blood, 100 per cent oxygen should be administered to the mother during the second stage of labor and during delivery.

The delicate tissues of the premature infant must be handled with the greatest possible care. The membranes should be preserved carefully whenever possible. A large episiotomy should be performed before the presenting part meets the resistance

of the pelvic floor in order to avoid unnecessary trauma. Delivery must be accomplished by the gentlest possible methods. The fetal head should be guided slowly through the introitus. Sudden expulsion frequently results in intracranial hemorrhage with the sudden release of pressure which occurs. The maternal expulsion powers should be completely effective for delivery of the infant and all traction upon the fetus should be avoided. Gentle pressure upon the fundus of the uterus can be used in preference to traction when it is necessary.

#### SUMMARY

An analysis of 300 consecutive labors resulting in the delivery of 324 premature infants is presented. The etiology of premature labor is obscure, and induction of labor in the presence of complications of pregnancy is a significant factor. Good prenatal care is of value in preventing complications but is of little value in preventing uncomplicated premature labor.

A direct relation between the size of the premature baby and its chance of survival is present. However, the condition of the baby at delivery is of even greater significance and 92.7 per cent of all the babies in good condition at the time of their delivery survived. The major factors influencing the condition of the child at delivery were the analgesia and anesthesia, method of delivery and immediate postnatal care.

Ideal management of labor includes no analgesia and regional or no anesthesia. Moderate analgesia and general anesthesia gives good results in large babies, but poor results in the smaller group.

An episiotomy always should be used for premature delivery and the maternal expulsive forces for expulsion of the child.

The immediate neonatal care should include:

1. Aspiration of mucus and other material from the mouth and nasopharynx as soon as the nose and mouth are exposed.
2. Maintenance of body warmth by placing the baby in a heated crib not more than one minute after delivery.
3. Administration of pure oxygen to the baby with an open mask within one minute of the time of delivery.
4. Avoidance of all unnecessary trauma or handling of the baby.

#### CONCLUSIONS

1. The ultimate survival of a premature infant is directly related to its weight at delivery.
2. Excellent survival records are obtained for babies in good condition at delivery.
3. Poor survival rates will occur for babies in poor condition at delivery.
4. The clinical estimate of the size of the baby is more reliable than the estimated duration of pregnancy in approximating its chance of survival.
5. The condition of the baby is determined large-



ly by analgesia and anesthesia given, the method of delivery and the immediate neonatal care given to the child.

Wake Forest College.

THE USE OF ANTICOAGULANTS IN THE TREATMENT  
OF DISEASES OF THE HEART AND BLOOD VESSELS  
WITH SPECIAL REFERENCE TO LONG TERM  
ANTICOAGULANT THERAPY

WILLIAM T. FOLEY, M.D., *New York*

THE DISCOVERY of heparin by McLean working in Howell's laboratory at Johns Hopkins in 1916 is now a matter of medical history. The more recent analysis of sweet clover disease in cattle leading to the discovery of dicumarol is a modern medical romance. Dicumarol was isolated, identified and synthesized by Link and his coworkers at the University of Wisconsin.

Solandt and Best in 1938 demonstrated that heparin in experimental animals was capable of preventing intravascular clotting. In their experiments they injected a sclerosing solution into isolated sections of a dog's coronary artery which was clamped off for ten minutes. In twelve of thirteen animals they produced a coronary artery thrombosis followed by myocardial infarction. If the animals were first given sufficient heparin, they were able to prevent this thrombus formation in eleven out of twelve dogs.

The work of Knisely and his group on blood sludge has been of interest to all. No doubt many have seen his colored motion pictures of the formation of sludge and thrombi under various experimental conditions in animals. Laufman has carried these experiments one step further. He has given his animals anticoagulants. In the experiments a loop of mesentery is observed under the microscope. The portal vein is clamped off. Blood flow slows down and plugs of sludge form. After twenty minutes, the plugs adhere to the sides of the vessels and a thrombus begins. This thrombus extends throughout the vascular tree. If the dogs have first been given therapeutic doses of dicumarol or heparin, sludge forms as before but a thrombus does not form. When the clamp is released the sludge breaks up and the circulation is resumed.

Allen, Barker and his group at the Mayo Clinic utilized the anticoagulants in the treatment of phlebitis to good advantage. Table 1 illustrates their statistics for dicumarol treated and also control groups of pulmonary embolism. These figures are astounding. They are so good that one finds it difficult to give them credence without confirmation. The confirmation comes from another side of the

Instructor in Medicine, Cornell University Medical College, and Asst. Attending Physician, New York Hospital.  
Presented before the 91st Annual Session, Missouri State Medical Association, Kansas City, March 27 to 30, 1949.

BIBLIOGRAPHY

1. Anderson, N. A., and Lyon, R. A.: *Am. J. Dis. Child.* 58:586, 1939.  
2. Smith, O. W.; Smith, G. V., and Hurwitz, D.: *Am. J. Obst. & Gynec.* 51:411, 1946.  
3. Eastman, N. J.: *Am. Pract.* 1:343, 1947.  
4. Beck, A. C.: *Am. J. Obst. & Gynec.* 51:173, 1946.

Table 1. *Nonfatal Pulmonary Embolism and Infarction (Barker)*

	Control Groups		Dicumarol Treated	
		Per Cent 100		Per Cent 100
Total—One Embolism	678		180	
Subsequent Venous Thrombosis, Pulmonary Embolism or Infarction	297	43.8	2	1.1
Subsequent Fatal Pulmonary Embolism	124	18.3	1	0.6

globe, from Sweden. During the war years, the Swedes made great strides in anticoagulant therapy. Although heparin was discovered in this country and the early animal experimentation was performed here, the first extensive clinical work was done in Sweden. Owing to poor communication during the war, it is only now that we in this country appreciate all the work that they have done. Erik Jorpes has written a brilliant book summarizing this work. Table 2 shows the Swedish statistics on pulmonary embolism. Note that the con-

Table 2.  
Cases of Thrombosis or pulm. infarct  
Bauer, Zilliacus

		Death	Percent
Conservative treatment	543	88	16
Heparin	769	3	0.45
Dicumarol	131	1	

(Dr. J. Erik Jorpes)

clusions are similar to those of the Mayo Clinic group. Of those cases receiving anticoagulants, less than 1 per cent died whereas 16 per cent of the control cases were fatal. Table 3 illustrates additional

Table 3. *Complications following thrombosis (Zilliacus 1946).*

	Thrombotic cases	Pulmonary embolism Death (—)	Spreading to the other leg
No specific treatment	214	60 (20) (+13 before or after thr.)	66
Heparin	342	8 (1) (+3 before or after thr.)	9
Heparin and Dicumarol	103		
Dicumarol	131		

(Dr. J. Erik Jorpes)

data as to thromboembolic complications in the Swedish series and lends further confirmation to the reports of the American group.

The excellent results obtained in the treatment of phlebitis led clinicians to try out these drugs on other types of intravascular clotting. Of course, the condition uppermost in all minds was coronary artery thrombosis. At first only quite ill cases were selected in which thromboembolic complications were to be expected. Experience with fifty such cases was most encouraging. As all of us know, to test any new drug is a difficult procedure. In order to evaluate its efficacy a large series of cases is needed and, of course, adequate control cases must be used. It was thought that to really test out the use of dicumarol in coronary artery thrombosis, 1,000 cases would be needed, half to be treated and the other half to be a control group. To obtain 1,000 cases, even in a busy hospital such as ours, would take many years. Accordingly the problem was taken up by a Committee of the American Heart Association. A cooperative clinic group of sixteen hospitals on a nationwide basis was organized. The aim was to obtain 1,000 cases all treated in a similar way except that one half would receive anticoagulants and the other half would not receive them. A report on 800 of these 1,000 cases is now available. Table 4 illustrates the group as a whole.

Table 4.

COMPOSITION OF SAMPLE	Total group: 800 cases of coronary occlusion with myocardial infarction surviving first day of hospitalization.	
Item Compared	Control Group (Even Days)	Treated Group (Odd Days)
Number of Cases	368	432
Average Age	60 years	59 years
Proportion Males	77%	76%
One or more previous infarction	24%	22%
Illness "severe" at onset	23%	30%
Anticoagulant therapy received (exceptions as noted)	88% no anticoagulants	81% dicumarol without heparin
	12% some anticoagulants (primarily after complications)	14% dicumarol plus some heparin
		3% no anticoagulants because of liver disease or hemorrhage
		2% no anticoagulants because of miscellaneous errors

It is self explanatory. This table shows the great saving in mortality. The control group had an overall mortality of 24 per cent; in the treated group this was reduced to 15 per cent. Please notice that the great saving in mortality occurs in the deaths due to thromboembolic complications. The next table illustrates more significantly than the previous one the value of anticoagulant therapy. Thromboembolic complications in the control group total 25 per cent. This was reduced to 12 per cent in the treated group. While this group of statistics is fine, I do not think that they portray the picture as well as they should. For statistical purposes, many cases have been included in the treated group which one would not now consider adequately treated.

The mortality of adequately treated cases is actually much less than this. A great deal has been learned from this large series of cases and I think that by starting treatment early with heparin and then following it with dicumarol that the mortality can be much further reduced. In our own private practice, my partner, Dr. Irving S. Wright, and I have been exceedingly fortunate in not having lost a case of coronary thrombosis in the last two and one half years.

Another group of cases that were a challenge are the rheumatic fever cases. I refer specifically to those cases of mitral stenosis with enlarged auricles which fibrillate and from time to time throw out showers of emboli. These emboli may land anywhere in the pulmonary circulation or the peripheral circulation, in the brain, in the extremities or in some vital abdominal organ. Until the advent of anticoagulants, there was no specific therapy that had any hope of interfering with the clotting process and so reducing the incidence of emboli. The first patient of this type was treated in October 1946. She had had many emboli, more than twenty in all, nine of which had occurred the previous week. The arms, legs, kidney and brain all had received multiple showers from her left auricle. There also had been numerous pulmonary emboli to the lungs. At the time we saw her she was desperately ill with a mesenteric embolus. Even though she had blood in her stool which is ordinarily considered a contraindication to anticoagulant therapy, in desperation she was started on heparin. Her recovery ensued. She has been maintained constantly on dicumarol ever since. She has not had another embolus. This woman is active socially and has been able to travel about the country, still being maintained on her dicumarol therapy. Success with this woman led us to adopt a similar procedure with other cases and there are now a group of such patients who are in their third year of anticoagulant therapy.

This long term therapy has posed many problems. First of all the patient usually is standardized in the hospital with daily prothrombin tests for several weeks. During that time their idiosyncracies to dicumarol are studied. They then are placed on daily maintenance doses and report to the office weekly for a blood prothrombin time estimation. At that time their daily dose is prescribed for the following week. In this manner, patients, who would otherwise be invalids, have been able to carry on their occupation and their social activities. Table 5 illustrates a group of these cases. Kindly notice that the tolerance to dicumarol is variable.

Table 5. Patients Receiving Dicumarol Therapy

No.	Name	Months on Dicumarol	Average Weekly Dose (Mg.)	Age (yrs.)	Weight (lbs.)
1.	Mrs. L.B.	28	800	39	110
2.	Mrs. J.C.	30	500	53	125
3.	Mrs. E.S.	27	300	42	112
4.	Mrs. M.S.	19	700	51	137
Diagnosis:		Rheumatic Heart Disease Mitral Stenosis Auricular Fibrillation Multiple Emboli			



There is no correlation between weight, age or sex. Each person seems to have his own dose. In this series of cases doses varied from as low as 300 mg. weekly to a high of 800 mg. weekly.

Phlebitis migrans can be a devastating disease. I have seen it travel all over the body. Starting in the leg it may affect the other leg, an arm, the abdominal veins and even the cerebral veins. Colonel R., case number 7 in table 6, is such a problem. While in the army he developed a phlebitis in the

Table 6. *Patients Receiving Dicumarol Therapy.*

No.	Name	Months on Dicumarol	Average Weekly Dose (Mg.)	Age (yrs.)	Weight (lbs.)
5.	Mrs. H.S.	21	300	29	167
6.	Mrs. G.G.	19	350	25	126
7.	Col. G.R.	22	300	57	166
8.	Mrs. M.M.	29	500	44	133
9.	Mr. K.N.	26	500	56	205
10.	Mr. A.S.	19	450	44	155
11.	Mrs. J.S.	22	400	31	140
12.	Mrs. E.W.	22	700	48	203
13.	Mrs. C.D.	22	175	40	145½
14.	Mr. H.C.	18	550	52	158

Diagnosis: 5- 7 Phlebitis Migrans  
8-14 Recurrent Phlebitis

right leg and subsequently had pulmonary emboli. The surgeons tied off his right femoral vein. A few weeks later phlebitis developed in the left leg and again he had pulmonary emboli. This time the army surgeons thought that they would surely trap any possible emboli to the lungs. They tied off his inferior vena cava. During convalescence from this operation, he again had a pulmonary embolus. This time the phlebitis had developed in his arm. They did not tie off the superior vena cava; instead he was referred for anticoagulant therapy. We have had him on dicumarol for the last twenty-two months. He is difficult to control. When his prothrombin time falls below 25 seconds, he forms thrombi. On the other hand, he has a tendency for his prothrombin time to shoot way up at the slightest extra dose and there is danger of hemorrhage. It has been a great effort to steer him between the rocks of thrombosis on the one hand, and hemorrhage on the other. We hope to be able to continue his treatment satisfactorily until the underlying disease burns itself out.

Case 13 presents a similar problem. Originally she developed phlebitis while cruising on her yacht in the Caribbean. The Coast Guard was summoned and flew her back to the mainland. She lives in Edgartown, Massachusetts, and flies into New York each week. On one such visit we found that her prothrombin time had unexpectedly risen to 100 seconds, a dangerous level. She already had flown home by the time we received this report from the laboratory so that it was necessary for her to fly back again for antidotal treatment with vitamin K. Careful questioning showed that she had increased her alcoholic intake from two glasses daily to over a quart on a weekend. Since then we have noticed this in other patients; that increased alcoholic intake decreases the tolerance for dicumarol. We have also noticed a similar effect with aspirin. Patients receiving dicumarol will have an augmented dicumarol effect by large doses of aspirin.

As yet the best theory for the mode of action of

dicumarol is that it acts in a specific manner to decrease prothrombin production in the liver. Possibly alcohol has a hepatotoxic action which may likewise interfere with prothrombin production. The five cases of table 7 are cases of recurrent coronary artery thrombosis. All five of these people

Table 7. *Patients Receiving Dicumarol Therapy.*

No.	Name	Months on Dicumarol	Average Weekly Dose (Mg.)	Age (yrs.)	Weight (lbs.)
15.	Mr. A.H.	19	350	47	165½
16.	Dr. M.	19	315	50	144
17.	Mrs. A.M.	15	300	49	116
18.	Mr. S.D.	15	350	52	183
19.	Mrs. C.S.	18	400	66	158

Diagnosis: Coronary Artery Thrombosis with Myocardial Infarction.

had had one or more coronary thromboses before the attack in question for which they received anticoagulant therapy. In an effort to prevent further thromboses they have been maintained on dicumarol. This is just a small group of cases and of course proves nothing, except that there have been no further thromboses during the administration of dicumarol to this group of patients.

All are aware of the dangers of anticoagulant administration. All authors including ourselves have emphasized at every meeting and in every paper that dicumarol administration should not be attempted without thoroughly reliable laboratory supervision. Unfortunately the prothrombin time test is subject to many vagaries. It is dependent on the skill and on the carefulness of the technician and also on the strength of that variable product called thromboplastin. It is because of the difficulties of this test that so many disastrous hemorrhages have occurred and are reported in the literature. We ourselves have had little serious difficulty from hemorrhage and I attribute this to two things: First of all that we have an excellent research laboratory at our finger tips and, secondly, that we have had special interest in the treatment of these cases and have taken extra pains and care to insure that they receive the proper dosage on each occasion.

The answer to the problem of administering an anticoagulant in the home without laboratory procedures is of course our goal. If heparin could be administered in a slow absorbing vehicle, this would seem to be the solution. For several years Loewe has advocated such a medication. It is called Pitkin's menstrium. One injection per day intramuscularly is sufficient to give adequate anticoagulant activity. The only test required is a coagulation time. This can, of course, be done at the bedside. The great drawback to such treatment has been that the injection is extremely painful. It is so painful that we have abandoned it entirely. Accordingly we have urged drug houses to put up heparin in a slow absorbing medium as they do for penicillin that will not be painful. They have at last succeeded in doing this. For the last four months we have used a new product to good effect. I think that before long it will be on the general market. It is called Depo-Heparin. It is the answer to many of the problems and will make anticoagulant therapy about as simple to administer as insulin.

400 Madison Avenue.

## ELECTROCARDIOGRAPHIC CHANGES IN CORONARY ARTERY DISEASE

PAUL S. BARKER, M.D., *Ann Arbor, Mich.*

CORONARY ARTERY disease is common and is increasing in importance. Electrocardiograms are often of inestimable value in the diagnosis of diseases of the coronary arteries. The purpose of this paper is to outline in a general way the usefulness and the limitations of electrocardiograms in coronary artery disease and to present some of the general principles by which they may be employed most effectively. Important contributions to the knowledge of the electrocardiographic changes which occur in coronary artery disease have been made by Smith,<sup>1</sup> Pardee,<sup>2</sup> Barnes and Whitten,<sup>3</sup> and Parkinson and Bedford.<sup>4</sup> This discussion is based largely upon the studies of Wilson, Johnston, Macleod and their associates.<sup>5, 6, 7</sup>

The clinician must consider the electrocardiographic findings as a part of the complete clinical picture, and must interpret then in the light of the other clinical findings. A normal electrocardiogram does not necessarily indicate a normal heart, nor does an abnormal electrocardiogram necessarily indicate serious or progressive heart disease. It is a mistake to make a diagnosis of heart disease which is based solely upon minor peculiarities of the electrocardiogram, the meanings of which, if any, are not yet known.

Disease of the coronary arteries causes electrocardiographic changes only as it affects the myocardium, the conduction mechanism or the rhythm of the heart. In coronary arteriosclerotic heart disease the electrocardiograms are sometimes normal. Often, however, they show changes such as inverted T-waves, left axis deviation, defective conduction or arrhythmias. Such changes are evidence of cardiac abnormality but are not specific for coronary heart disease.

Curves taken during an attack of angina pectoris usually show more specific changes such as transient displacement of the RS-T junction or modifications of the RS-T segment or of the T-wave as a whole. In atypical cases, or when the diagnosis is in doubt, such changes in curves taken during attacks may reveal the cardiac origin of the symptoms. Rarely, however, are electrocardiograms obtained during spontaneous attacks of angina. Attacks may be induced by means of exercise or by other methods. Curves obtained during such induced attacks and showing the characteristic changes have established the correct diagnosis in doubtful or atypical cases. Every attack of angina pectoris carries with it a threat to the life of the

individual. For this reason this procedure has a limited usefulness. It should be employed only in those cases in which the diagnosis is in doubt and in which the importance of establishing the diagnosis clearly justifies the risk assumed. It should not be used indiscriminately or when the diagnosis is obvious.

Acute myocardial infarction usually causes characteristic electrocardiographic changes. The prominent Q-waves are often, but not always, permanent. The displacement of the RS-T segment and the alterations of the T-wave undergo progressive changes. It is important to obtain repeated curves at intervals of several days in order to establish the diagnosis in doubtful cases and to confirm it in all cases. In acute infarction the changes are progressive; if the changes are not progressive they cannot be attributed to an acute process.

Multiple chest leads sometimes reveal evidence of infarction not apparent in the three standard leads. Special chest leads may disclose evidence of posterolateral or high lateral infarcts, while esophageal leads are of limited usefulness in revealing posterior infarction. Evidence of both old and recent infarcts can sometimes be recognized. The changes of myocardial infarction usually can be recognized in the presence of right bundle branch block, but not in the presence of left bundle branch block. Old infarcts often are revealed by the persistence of prominent Q-waves, but sometimes the curves return to normal. In rare instances acute myocardial infarction fails to cause recognizable electrocardiographic changes.

Electrocardiographic changes which resemble in some respects those of myocardial infarction may be caused by acute pericarditis,<sup>8</sup> by pulmonary embolism,<sup>9</sup> and by neoplastic<sup>10</sup> or localized inflammatory<sup>11</sup> lesions of the ventricular wall. The electrocardiogram is of inestimable value in the diagnosis of myocardial infarction, but rarely should the diagnosis be based upon it exclusively.

### SUMMARY

In coronary arteriosclerotic heart disease the electrocardiograms are sometimes normal. Commonly, however, they show changes which indicate cardiac abnormality but are not specific for this type of heart disease.

Curves obtained during attacks of angina pectoris often show characteristic changes of diagnostic importance.

Acute myocardial infarction usually causes characteristic electrocardiographic changes. The changes are progressive. Multiple precordial leads are helpful in many ways, and special leads may

From the Department of Internal Medicine, University of Michigan Medical School and the University Hospital.  
Presented before the 91st Annual Session of the Missouri State Medical Association, Kansas City, March 27-30, 1949.



A "soft matrix for bulk for the stools"\*



Metamucil®

Principles ascribed by this author\* to Metamucil—the "smoothage" management of constipation—are:

- ... *demulcent action*
- ... *ability to absorb and hold water*
- ... *nonirritating to the intestinal mucosa*
- ... *providing a soft matrix for bulk in the stools*

Metamucil promotes smooth, normal evacuation by furnishing a nonirritating, water-retaining colloidal residue in the large bowel.

Metamucil is the highly refined mucilloid of *Plantago ovata* (50%), a seed of the psyllium group, combined with dextrose (50%) as a dispersing agent.

G. D. Searle & Co., Chicago 80, Illinois.



Searle

*Research in the Service of Medicine*



YOU MAY RELY on the merchants in your community who display this emblem. Camp Scientific Supports are never sold by door-to-door canvassers. Prices are always based on intrinsic value.

# CAMP

FOR ALL BASIC

*Scientific  
Support  
Needs...*

Prenatal  
Postoperative  
Postnatal  
Pendulous Abdomen  
Breast Conditions  
Hernia

Orthopedic  
Lumbosacral  
Sacro-Iliac  
Dorsolumbar  
Visceroptosis  
Nephroptosis

● Developed and improved over four decades of close cooperation with the profession, basic CAMP designs for all basic scientific support needs have long earned the confidence of physicians and surgeons here and abroad. All incorporate the unique CAMP system of adjustment. Regular technical and ethical training of CAMP fitters insures precise and conscientious attention to your recommendations at moderate prices.

If you do not have a copy of the latest CAMP "REFERENCE BOOK FOR PHYSICIANS AND SURGEONS," it will be sent on request.

S. H. CAMP and COMPANY, Jackson, Michigan  
World's Largest Manufacturers of Scientific Supports  
New York • Chicago • Windsor, Ontario • London, England



**NOTE:** Communities throughout the nation will mark the 11th annual observance of NATIONAL POSTURE WEEK October 17 to 22 as the year's leading event in public health education. These two heavily illustrated booklets on posture, prepared especially for distribution by physicians to their patients, have been widely approved by the profession. Their titles: "The Human Back... its relationship to Posture and Health" and "Blue Prints for Body Balance." Ask for the quantity you need on your letterhead. SAMUEL HIGBY CAMP INSTITUTE FOR BETTER POSTURE, Empire State Building, New York 1, N. Y. Founded by S. H. Camp and Company, Jackson, Mich.





be useful in certain unusual or particular circumstances.

1313 E. Ann Street.

#### BIBLIOGRAPHY

1. Smith, F. M.: The Ligation of Coronary Arteries with Electrocardiographic Study, *Arch. Int. Med.* **22**:8-27, 1918.
2. Pardee, H. E. B.: An Electrocardiographic Sign of Coronary Artery Obstruction, *Arch. Int. Med.* **26**:244-257, 1920.
3. Barnes, A. R., and Whitten, M. B.: Study of the R-T Interval in Myocardial Infarction, *Am. Heart J.* **5**:142-171, 1929-30.
4. Parkinson, J., and Bedford, D. E.: Successive Changes in the Electrocardiogram After Cardiac Infarction (Coronary Thrombosis), *Heart* **14**:195-239, 1927-29.
5. Wilson, F. N.; Macleod, A. G.; Barker, P. S.; Johnston, F. D., and Klostermeyer, L. L.: The Electrocardiogram in Myocardial Infarction with Particular Reference to the Initial Deflections of the Ventricular Complex, *Heart* **16**: 155-199, 1933.
6. Wilson, F. N.; Johnston, F. D.; Rosenbaum, F. F.; Er-

langer, H.; Kossman, C. E.; Hecht, H.; Cotrim, N.; Menezes, R.; Scarsi, R., and Barker, P. S.: The Precordial Electrocardiogram, *Am. Heart J.* **27**:19-85, 1944.

7. Wilson, F. N.; Johnston, F. D.; Rosenbaum, F. F., and Barker, P. S.: On Einthoven's Triangle, The Theory of Unipolar Electrocardiographic Leads, and the Interpretation of the Precordial Electrocardiogram, *Am. Heart J.* **32**:277-310, 1946.

8. Noth, P. H., and Barnes, A. R.: Electrocardiographic Changes Associated with Pericarditis, *Arch. Int. Med.* **65**:291-320, 1940.

9. McGinn, S., and White, P. D.: Acute Cor Pulmonale Resulting from Pulmonary Embolism; Its Clinical Recognition, *J. A. M. A.* **104**:1473-1480, 1935.

10. Rosenbaum, F. F.; Johnston, F. D., and Alzamora, V. V.: Persistent Displacement of the RS-T Segment in a Case of Metastatic Tumor of the Heart, *Am. Heart J.* **27**:667-675, 1944.

11. Reichenfeld, L.: Miliary Tuberculosis and Tuberculosis of the Heart Muscle, *Ztschr. f. Kreislaufforsch.* **31**:697, 1939; *Abst. Am. Heart J.* **19**:377, 1940.

## THE MANAGEMENT OF PROSTATISM

JOHN F. PATTON, M.D., *St. Louis*

THE PROSTATE IS a mass of glandular and muscular tissue surrounding the proximal portion of the male urethra, lies securely within the confines of the perineum and forms an integral part of the sexual apparatus of the male. Its inherent qualities together with the abuse to which it is so often subjected permit it to be a fruitful nidus for a variety of diseases and derangements of function. It possesses the peculiar characteristic of undergoing hyperplasia in later life and, because of its anatomic position at the neck of the bladder, frequently interferes with the urinary flow. The condition of prostatic enlargement has been designated by a number of apparently synonymous terms such as "hypertrophy," "hyperplasia," "prostatic adenoma," "prostatism." This may be accounted for readily by the uncertainty which still exists as to the etiology of the changes which take place within and about the gland. I shall not go into a discussion of the numerous theories that have been advanced, except to say that none, including the "adenomatous," "inflammatory" or "hormonal," offers the sole explanation. Although the problem of etiology has not been solved, considerable advancement has been made in the study of the nature and obstructive effects of the growth, and even greater strides in its management and operative relief. The operative mortality in prostatic surgery at the turn of the century has been estimated at the almost prohibitive rate of 20 to 30 per cent, while at the present time it compares favorably with that of almost any other major surgical procedure, including appendectomy. The prostatic patient of today can look forward to a happier solution of his problem than ever before, and takes an operative risk of not more than 1 to 3 per cent.

It has been estimated by various authorities that prostatic hypertrophy occurs in from 30 to 50 per cent of all adult males. White states that one third of all males reaching the age of 60 have prostatic enlargement and one half of these develop symp-

toms. The symptoms associated with the changes in the benign gland usually become manifest between the ages of 50 and 60, which is approximately a decade in advance of those commonly associated with carcinomatous degeneration. Both may occur at an earlier period, however. The higher incidence of hyperplastic changes in the prostates of the Nordic and Semitic races is well known, whereas its comparative rarity among the Negro and the Mongolian races has been a subject of comment.

For practical purposes, benign enlargements of the prostate may be divided into two categories: (1) glandular hyperplasia, including median lobe, lateral lobe and trilobar enlargements; and (2) fibrous hyperplasia, true or mixed, including fibrous bars and contractures. The former comprises approximately 75 per cent of all prostatic obstructions. As the prostate enlarges its extension is limited to three directions: (1) upward to the bladder base, sometimes termed intravesical growth; (2) laterally to the levatores ani; and (3) posteriorly toward the rectum. The symphysis pubis prevents extension anteriorly and the urogenital diaphragm blocks it in an inferior direction.

Keyes in his inimitable fashion has stated "retention, congestion, inflammation—these are the fates of the prostatic." The onset of symptoms attributable to enlargement of the prostate may be insidious and, unless the individual has had a sudden onset of acute retention, it may be difficult for him to state precisely the date that symptoms first began.

The clinical history of a typical case may be somewhat as follows: A middle aged individual, apparently in good health, becomes conscious of a feeling of weight in his perineum, not painful, but at times annoying. It is unusual, however, for him to seek advice at this stage. This phase is the expression of congestion in the prostate before definite signs of obstruction become manifest. It may persist, or be marked by remissions for an indefinite period. Simultaneously, or at a subsequent date, he may experience a desire to void more frequently than was his usual custom and, whereas he former-

From the Department of Surgery, Washington University School of Medicine, and Barnes Hospital, St. Louis.

Read before the 91st Annual Session, Missouri State Medical Association, Kansas City, March 27-29, 1949.

ly was able to sleep through the night, he now has to get up once or twice to void. In addition he begins to experience some hesitancy in starting the stream and notices that it lacks its customary force and dribbles at the end.

There is another type of patient, who, prior to the onset of his present difficulty, was perfectly well and apparently in the prime of life. After a hearty evening meal, in which he had partaken possibly of a few extra cocktails, he finds himself awakened from sleep with an urgent desire to urinate but, on attempting to do so, finds that he cannot consummate the act. After a hot sitz bath or relief of his acute retentive attack by catheterization, he thereafter may be able to void spontaneously. Almost invariably, however, he is precipitated into another attack after an interval of a few weeks to a few months, if he has not already remained retentive on the first occasion.

A third type of patient is one in whom the first symptom which focuses attention on the urinary tract is hematuria. Apparently perfectly well in other respects, he notices, possibly after a slight exposure the night before, the sudden appearance of gross blood on voiding the next morning. Further inquiry may elicit the information that he had been getting up once or twice during the night but had not taken particular cognizance of this occurrence. Hematuria as the initial symptom of prostatic obstruction may be accounted for by the vascularity of the prostatic urethra coincident with overgrowth of the gland. It may be noticed first in the later stages of the disease, in which case carcinoma must be excluded. However, hemorrhage is a more frequent accompaniment of benign growths.

Again, there is the clinical picture of the individual obviously in poor health, who first consults his physician for symptoms of thirst, nausea, loss of appetite and lassitude. He may complain of dull aching pain in the lumbar region and he may be laboring under the belief that although some alteration in his urinary stream has obviously occurred, he is emptying his bladder completely, whereas, in fact, it may be dilated to the level of the umbilicus. If he has not already experienced incontinence, he invariably will develop it.

There is also another type of patient which deserves comment and that is the individual of middle age who experiences acute episodes of urinary tract infection. Apparently perfectly well, he suddenly develops chills, fever and acute bladder symptoms in the form of frequency, nocturia and painful urination. This acute episode usually will subside promptly with chemotherapy, only to recur at some later date. Symptoms attributable to the prostate during the periods of remission may be so minimal as to be overlooked. Examination usually will reveal, however, that he is carrying a small residual urine. Attention to the prostate and relief of the obstruction, however mild it may appear cystoscopically, solves the problem of his recurrent infection. I have seen a number of such patients relieved

of their recurrent episodes of infection and have been impressed by the fact that the prostate has been too frequently overlooked as the cause.

The diagnosis of enlargement of the prostate is often self-evident from a consideration of the age of the patient and his clinical history. However, there are those in whom the symptoms are not clearly defined and the diagnosis is made only after complete examination. In either case, a thorough study should be undertaken. The customary procedure in my practice is somewhat as follows. The patient is instructed to void into two glasses and the character of the stream is noted in regard to size, force and presence of dribbling. The urine is submitted to a careful chemical and microscopic analysis to exclude possible occurrence of diabetes or nephritis and to determine whether or not infection is present. The external genitalia then are inspected and examination also is made for the presence of herniae or hemorrhoids. The patient suffering from either of these latter conditions should not be subjected to repair of his hernia or excision of his hemorrhoids in the presence of prostatic hypertrophy, as the straining incident to his obstruction tends to promote recurrence. Rectal examination is one of the most important steps in the study. A wealth of diagnostic information may be elicited by the well educated index finger. The tone of the rectal sphincter should be noted; marked relaxation may denote a central nerve lesion. The prostate should be evaluated as to size, shape, symmetry, consistency and moveability, and particular note taken of areas of nodulation, induration or unusual hardness. In estimating the size of the prostate, the preferable method is to grade the degree of growth on a scale of 1 to 4. It should be pointed out here that the size of the prostate per rectum is not necessarily indicative of the degree of encroachment at the bladder neck. Young found rectal examination to coincide with cystoscopic findings, regarding the extent of intravesical protrusion, in only 39 per cent. In palpation of the prostate, one must always keep in mind the possibility of malignancy. The ratio of incidence of carcinoma to benign prostatic enlargement is approximately 1 to 4. Marked asymmetry of the prostate with one lobe larger than the other, fixation of the gland, and presence of nodules or areas of hardness are points in the diagnosis of carcinoma. Prostatic calculi may at times offer some difficulty in differential diagnosis, but can be ruled out by x-ray.

Following the rectal examination, the patient is instructed to assume the recumbent position and the abdomen is palpated, taking particular note of the suprapubic region and the kidney areas. He is then catheterized for residual urine. It need not be emphasized that rigid asepsis and the utmost gentleness must be observed in carrying out this procedure. The presence and amount of residual urine is a highly important factor in the diagnosis and is accepted as indicating some degree of bladder neck obstruction. The absence of residual



urine, however, does not rule out the possibility of prostatic hypertrophy. Compensation of the bladder wall with hypertonia may enable the individual to empty his bladder in spite of the obstruction in front of it. In such cases, the presence of gross trabeculation of the bladder wall and prostatic encroachment at the vesical neck, as determined by cystoscopy, will furnish the evidence necessary for a diagnosis.

Provided there are no absolute contraindications, such as complete retention, acute epididymitis, prostatic abscess or bordering uremia, cystoscopy is the next step in the urologic study. In the presence of any of these, it should be delayed until the patient's condition permits. There has been a tendency in the past to spare the patient cystoscopy when the symptoms were obviously those of prostatic hypertrophy and, even in the present day, there are a few who advocate reliance on cystography and intravenous urography. This is a practice which should be deprecated since it not only promotes uncertainty but may also lead to neglect in the early institution of appropriate therapy for an associated malignancy of the bladder. Cystoscopy is imperative in order to determine the nature and configuration of the obstruction at the vesical neck, as well as the presence or absence of associated conditions. The presence of a bladder tumor coincident to the obstructing prostate may be expected in approximately 4 per cent of the cases. The incidence of vesical calculus is approximately 10 per cent.

Other procedures in the preoperative urologic study are cystography and intravenous urography. The cystogram is important in determining the size and extent of a diverticulum and also gives the necessary information of its emptying ability in deciding on necessity for removal. Intravenous urography is an important addition to the armamentarium and has become a routine practice in most clinics. Ureteral catheterization in the presence of prostatic hypertrophy is hazardous and often mechanically impossible, and retrograde pyelography is to be discouraged. The delineation of the outline of the upper urinary tract, however, by the intravenous route, is a safe procedure and offers much in the way of diagnosis as well as prognosis. Renal function tests and blood chemistry studies will estimate the degree of bilateral renal damage but unilateral changes can be determined only by intravenous urography.

A complete physical examination is essential before the patient is subjected to surgery. The clinical appearance of the patient is often the best guide in evaluating him as a surgical risk, but superficial findings are apt to be misleading and advantage should be taken of the modern improvements and aids which have enhanced diagnostic acumen. Blood chemistry studies should include, besides the urea or nonprotein nitrogen, a determination of the blood sugar. Subclinical diabetes is not an infrequent finding and failure to recognize it may considerably alter the postoperative course. Evaluation of the cardiovascular system

forms the most important part of the preoperative study. A rather high incidence of heart disease may be expected in these elderly patients, and it is highly important to have a knowledge of their cardiac status so that certain precautions may be exercised in an effort to prevent circulatory accidents. Willius, in a detailed study of a large group of prostatic patients found that 40 per cent had cardiac disease and recommended electrocardiography as a routine. All are aware that heart disease per se is no contraindication to surgery and that most of these patients take anesthesia well. Perhaps the poorest surgical risk is the individual suffering from severe myocardial damage with decompensation. In such cases, caution must be exercised in the administration of intravenous fluids, so as not to overload the circulation. It is important, particularly in coronary disease, to prevent a sudden drop in blood pressure during or following the operation, or allow it to remain down for any appreciable period. Whereas sepsis was formerly the chief cause for the mortality in prostatic surgery, this problem has been all but solved by improved chemotherapeutic agents and antibiotics, and circulatory accidents now head the list. Fortunately, however, this complication is not frequent, and the practice of early ambulation has aided in further reducing its incidence.

The treatment of prostatism may be discussed under two headings: (1) palliative and (2) operative. The application of hormonal therapy in benign prostatic enlargement has been both unsatisfactory and disappointing. Symptoms associated with the irritative type of prostatism, in which there is no obstructive pathology, may often be relieved by conservative measures such as application of heat, local treatment and occasional massage. These patients may be kept under observation, treated expectantly, and quite possibly surgery may be forestalled. If on subsequent examinations retention is found, then operative relief of the obstruction should be considered.

It might be well at this point to discuss briefly the preventive treatment of prostatism. While there is no known prevention for prostatic enlargement, I am of the firm belief that attention to chronic prostatic inflammation in its early stages and subsequent periodic observation will definitely reduce the incidence of physiologic obstruction. This contention is substantiated by a large group of patients who have been observed over a period of many years and who have advanced into the prostatic age without the usual incidence of obstructive changes. If all males at the age of 45 would submit themselves for examination of their prostates, I firmly believe that much could be accomplished in the way of prevention by appropriate measures designed to relieve early inflammation, congestion and irritability.

One should not procrastinate, however, in applying surgical measures when there is indication for it. Kretschmer, in a recent study of the effects of prostatic obstruction on the upper urinary tract,

confirmed an impression that the prostatic patient of today seeks relief earlier than his fellow sufferer of ten years ago. He also demonstrated that the degree of injury to the kidney and ureter, as well as coexisting pathology of the bladder, is less and in direct proportion to the duration of the obstructive symptoms. These facts should serve as a stimulus for recognition and more careful evaluation of early symptoms of prostatism so that corrective measures may be applied more promptly, and thus further reduce the incidence of obstructive uropathy.

Adequate preparation of the patient is of the utmost importance regardless of the type of surgery contemplated. This usually requires only a few days. However, the presence of a large residual urine with gross infection demands preliminary drainage and a longer period may be necessary. An individual is only qualified for surgery to the prostate when he is in the best possible condition that present day methods of preparation can offer him. Age is no contraindication; some of the oldest patients stand surgery the best. Preliminary drainage when indicated for relief of toxemia, hygienic therapy for general body building, methods of elimination and application of chemotherapy for control of infection should be conducted until the patient looks well, feels well, eats well, the temperature is normal, and until the blood nitrogen is within normal limits or has become stabilized. Any deviation from this routine is likely to increase postoperative complications and mortality rate.

In considering the surgical treatment of prostatism, several methods of approach are available: transurethral resection, enucleation by the perineal route, suprapubic prostatectomy in one or two stages and the more recent retropubic prostatectomy as introduced in 1945 by Terence Millin of London. Time does not permit a discussion of the

technics of each. The selection of the type of operation is largely one of individual judgment, based upon the surgeon's own criteria, his experience and ability to perform the various procedures. In any event, the choice should be governed by selection of the operation best suited to the particular type of prostate, at the same time taking into consideration the patient's general condition, and his best chances for a good functional result with minimal risk. Under no circumstances should an attempt be made to fit the prostate to any one type of operation. Although I cut my urological teeth on a transurethral instrument, I have had experience with all of the procedures and at the present time apply transurethral resection in approximately 50 per cent, one stage suprapubic prostatectomy in approximately 40 per cent, and the two stage operation in less than 10 per cent. Retropubic prostatectomy has been gaining some favor in this country during the last three years. A total of twenty-six such operations have been performed at the Barnes Hospital and I have been impressed by the relatively smooth postoperative course and freedom from complications.

#### SUMMARY

1. The problem of prostatism has been discussed in its various phases.
2. Complete physical examination, as well as a detailed study of the patient's urogenital system, is essential before institution of corrective therapy.
3. Adequate preoperative preparation is the keynote to a lowered mortality.
4. Selection of the type of operation should be based on the size and configuration of the prostate and the ultimate aim of giving the patient the best possible functional result with the least possible risk.

723 University Club Building.

#### REPORTS BLACK HAIR TONGUE DEVELOPMENT OF PENICILLIN USE

Discoloration of the tongue and the growth of fine hairs on the tongue associated with the administration of penicillin is reported in the August 13 *Journal of the American Medical Association*.

Dr. Samuel A. Wolfson of Los Angeles presents four cases of black hairy tongue, a condition which has been known for many years but only recently recognized as a reaction to penicillin.

Black hairy tongue is an uncommon disease of unknown causation, although it is thought in some instances to be due to a congenital abnormality which develops in later life. The filiform papillae turn dark and become densely matted by hairlike filaments that may grow as long as one half inch. In penicillin therapy, the condition usually occurs in forty-eight hours.

"Once the discoloration has developed it can be reversed by interrupting the penicillin therapy," Dr. Wolfson says. "The tongue will return to its normal state in about one month. Adjunctive treatment with mouth washes and rinses is of doubtful value."

Saying that the condition resolved itself when penicillin therapy was discontinued, he adds:

"This and the absence of recurrences are strong evidence that penicillin plays a role in the production of the black tongue, albeit the manner in which it acts is still uncertain."

Commenting on the report of a British physician who noted discoloration of the tongue in 20 per cent of a group observed for that specific effect, Dr. Wolfson says: "I am sure that figure will prove not to be too high if careful observations are made in all persons using penicillin, particularly oral preparations. I feel certain that many discolored tongues are seen. However, the manifestation is not recognized as due to penicillin but attributed to the associated illness.

"On the tongues of lighter coloration the condition could easily escape detection. Undoubtedly, the manifestation will be recognized more frequently as its association with penicillin becomes more widely known."

He expresses the conclusion that the antibiotic acts as an irritant, although the precise mechanism of its action is yet to be demonstrated.



Having a wonderful vacation



Wherever your pollen-sensitive patient spends his vacation, TRIMETON\* may add to his enjoyment and rest by alleviating his symptoms of pollinosis. TRIMETON is an unusual antihistaminic. Essentially different in chemical composition, it is so potent that only one 25 milligram tablet is usually required to attain the desired relief in fifteen to thirty minutes. Best of all, your patient isn't likely to sleep away his vacation because the small milligram dosage lessens side effects. Your patient will also appreciate that the high potency of TRIMETON also means lower cost of therapy.

# Trimeton

**Dosage:** One 25 mg. tablet one to three times daily.

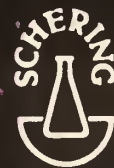
TRIMETON, brand of propenpyridamine, 25 mg. tablets, scored, are available in bottles of 100 and 1000.

\*TRIMETON trade-mark of Schering Corporation

Schering

CORPORATION • BLOOMFIELD, NEW JERSEY  
IN CANADA, SCHERING CORPORATION LIMITED, MONTREAL

TRIMETON



## PRESIDENT'S PAGE

Medical, surgical and hospitalization programs now in existence should receive every encouragement from the medical profession. In Missouri, the medical and hospitalization plans are continuing to enroll new subscribers



at a rapid rate. More than 1,250,000 persons are now members of the Blue Cross plans in Missouri, while 406,000 are members in the newer Blue Shield plans.

There were fifty-nine medical care plans sponsored by state or county medical societies which were using the Blue Shield emblem on March 31, 1949. The plans had a total enrollment at that time of 10,505,165 persons. The affiliated hospitalization Blue Cross plans at that time reported slightly more than 32,000,000 persons as members. The countless private insurance companies which write similar coverage are likewise expanding rapidly.

If given an opportunity, these plans eventually will cover most people for a major part of their hospital and medical care expenses. As experience warrants, benefits will be increased or added. From most humble beginnings, plans are now playing a major role in the economic picture of medical care. That the people want this coverage is evidenced by the enrollment figures.

*Wallis Smith.*



# THE JOURNAL

of the

## Missouri State Medical Association

623 Missouri Bldg. Telephone: Newstead 0404-05

Subscription . . . \$3.00 a year in advance

Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent.

SEPTEMBER, 1949

### EDITORIALS

#### KANSAS CITY SOUTHWEST CLINICAL SOCIETY FALL CONFERENCE

The Kansas City Southwest Clinical Society will present its twenty-seventh Annual Fall Clinical Conference October 3, 4, 5 and 6. The four days will include scientific presentations, clinicopathologic conference, citizen-physician problem conference, daily round table luncheons with question and answer periods, scientific and technical exhibits, motion pictures and entertainment.

Appearing on the program will be Drs. Edgar V. Allen, Rochester; Harry E. Bacon, Philadelphia; Grayson L. Carroll, St. Louis; O. T. Clagett, Rochester; R. W. Danielson, Denver; Aubrey Hampton, Washington; Lewis M. Hurxthal, Boston; Frank Lahey, Boston; Virgil H. Moon, Winston-Salem; Walter L. Palmer, Chicago; John L. Parks, Washington; I. S. Ravdin, Philadelphia; Wolfgang W. Zuelzer, Detroit.

The program appears in the July-August issue of the *Kansas City Medical Journal* or details may be obtained from the executive office, 630 Shukert Building, Kansas City.

#### TAXATION

Information available indicates the shift in the

(In Millions)

Years	1932	%	1937	%
Federal	\$1,790	22.0	\$ 4,765	38.8
State	1,890	23.2	3,013	24.3
Local	4,468	54.8	4,481	36.6
	\$8,148	100.0	\$12,259	100.0

(In Millions)

1942	%	1947	%	1948	%
\$12,286	59.0	\$35,117	75.2	\$37,632	74.0
3,939	18.9	5,776	12.3	6,807	13.3
4,589	22.1	5,795	12.5	6,498	12.7
\$20,814	100.0	\$46,688	100.0	\$50,937	100.0

Federal tax collections do not include miscellaneous receipts of the Federal Government nor payments to Social Security trust funds.

State collections include local shares of state-imposed taxes. Local collections exclude shares of state-imposed taxes.

"Facts and Figures" published by the Tax Foundation, New York, N. Y., and Annual Reports of the Secretary of the Treasury.

tax dollar which has occurred in the last fifteen years. The table shown outlines the distribution of taxes in dollars and percentages between the federal, state and local governments. All, of course, show an increase; however, the shift of tax dollars from state and local governments to the federal government in Washington is probably the main reason why state and local governments are demanding federal contributions to support programs of welfare.

Thus, the trend causes a weakening of local responsibility, curtails the local participation of citizens in government, undermines democratic processes and is leading toward a national government instead of the present system of state governments.

#### PREVENTIVE MEDICINE AND SMALLPOX

The importance of preventive medicine scarcely can be better illustrated than by statistics on smallpox. In 1948 there were fifty-nine cases of smallpox in the United States as compared to 14,939 in 1938, the 1948 figure being less than 1 per cent of the 1938.

According to figures given by the Metropolitan Life Insurance Company, there were 173 cases reported in 1947. In 1948 there were twenty-seven states and the District of Columbia entirely free from smallpox, an area embracing about two-thirds of the total population. Missouri was not among this group with such an enviable record. Missouri had four cases in 1948 and eleven in 1947.

With the marked downward trend in smallpox, it might be expected that the disease soon would be wiped out in this country but to date in 1949 there have been forty-nine cases as compared with forty-five for the similar period in 1948. Missouri has reported eight cases so far this year and together with Texas, Kansas and Mississippi is considered a residual foci of the disease.

The statistics show what can be done through preventive medicine, but they also illustrate dramatically that there can be no slowing up of prevention and that vaccination and revaccination must continue to guard against the disease.

#### NEWS NOTES

Melvin A. Casberg, M.D., has been appointed dean of the St. Louis University School of Medicine and assumed his duties August 1. Dr. Casberg graduated from the school in 1936.

Orr Mullinax, M.D., has been appointed superintendent of State Hospital No. 2 at St. Joseph. Dr. Mullinax has maintained his residence in St. Joseph during the time he served as director of the Division of Mental Diseases in Jefferson City.

E. E. Nixon, M.D., Gallatin, was a speaker recently at a meeting of the Gallatin Rotary Club and spoke on compulsory health insurance.

W. O. Finney, M.D., Chaffee, was elected president of the State Board of Medical Examiners at a meeting on July 31. Edwin C. Schmidtke, M.D., Columbia, was elected vice president, and W. L. Brandon, M.D., Poplar Bluff, secretary-treasurer. The other members of the board are Howard B. Goodrich, M.D., Hannibal; F. T. H'Doubler, M.D., Springfield, and E. C. White, M.D., Kansas City.

Lee D. Cady, M.D., formerly of St. Louis, is now manager of the Veterans Administration Hospital at Houston, Texas.

Physicians in Missouri are invited to the first annual meeting of the Southwestern Surgical Congress to be held at the Shamrock Hotel, Houston, Texas, September 26 through 28.

A. N. Lemoine, Jr., M.D., Kansas City, served as one of the physicians participating in a refresher course for Alaska native service doctors in remote areas on newer technics and developments.

The Missouri State Board of Medical Examiners will hold an examination at the Phillips Hotel, Kansas City, on October 24, 25 and 26. Applications should be in the office of the board thirty days before the examinations. Reciprocity applications will be considered at a meeting on October 23. Communications concerning the examinations should go to John A. Hailey, Executive Secretary, P. O. Box 4, Jefferson City.

## MUSINGS OF THE FIELD SECRETARY

A substantial increase for Missouri, particularly rural Missouri, in hospital beds is in the making. The state Hospital Advisory Council for Construction under the federal Hill-Burton Aid plan (Public Law 725) reports that \$2,213,868.42 of Missouri's federal allotment for the fiscal year, July 1, 1947, to June 30, 1948, which allotment amounted to \$2,280,013, has been allocated for the construction of the following facilities:

Fifty bed hospital at Perryville, fifty bed hospital at Rolla, seventy-nine bed hospital at Kennett, fifty-six bed hospital at Hayti, additions of thirty-four beds at Nevada and sixty at Kirksville, additions of fifty chronic beds and thirty-four psychiatric beds at Menorah Hospital in Kansas City, two health centers in St. Louis City and a building to house the new health unit at Poplar Bluff. Most of these new facilities are actually under construction.

The federal allotment under Public Law 725 for Missouri for the fiscal year, July 1, 1948, to June 30, 1949, is \$2,293,924 which sum at present has been earmarked, but not allocated, for hospital base area No. 4, Springfield area. However, other areas which are in a position to build or add new hospital facilities and can meet the requirements under the Hill-Burton Aid plan have an

opportunity to get part of the 1949 fiscal allotment before it is allocated definitely to base area No. 4 or to get in on the 1950 fiscal allotment which is expected to be available in the near future.

The Missouri Division of Health and the Hospital Advisory Council are now working on a re-survey of the hospital facilities in Missouri and soon will write a revised construction plan to be submitted for approval to the Surgeon General of the Public Health Service. This approval is necessary before Missouri receives the 1950 fiscal year federal aid allotment for hospital construction.

In addition to the federal aided hospital facilities just mentioned, there are other hospitals being built in the state without the use of federal funds. Such hospitals are located at Branson, Lamar, Fairfax, and at St. Joseph an addition to the Missouri Methodist Hospital.

At present there are numerous bills pending in the United States Senate and House of Representatives which are designed to make more federal money available to the states for hospital construction and to increase the federal aid percentage to each construction project.

## DEATHS

**Yeargain, John P., M.D.,** Irondale, a graduate of Barnes Medical College, 1904; honor member and former president of the St. Francois-Iron-Madison-Washington-Reynolds County Medical Society; aged 73; died June 17.

**Meredith, Joseph J., M.D.,** St. Louis, a graduate of Missouri Medical College, 1893; honor member of the St. Louis Medical Society; aged 84; died June 27.

**Patton, Frederick W., M.D.,** Mount Vernon, Illinois, a graduate of Miami Medical College, Cincinnati, 1884; honor member of St. Louis Medical Society; aged 94; died July 9.

**Thierry, Charles W., M.D.,** St. Louis, a graduate of Washington University School of Medicine, 1898; Fellow of the American Medical Association; honor member of the St. Louis Medical Society; aged 74; died July 23.

## MISCELLANY

STATEMENT OF H. E. SLUSHER ON BEHALF OF THE AMERICAN FARM BUREAU FEDERATION, ON A NATIONAL HEALTH PROGRAM, BEFORE THE HEALTH SUBCOMMITTEE OF THE COMMITTEE ON EDUCATION AND LABOR OF THE UNITED STATES SENATE, June 21, 1949.

My name is Emmet Slusher. I own and operate, in partnership with my son, a farm in Lafayette County, Missouri. I am President of the Missouri Farm Bureau Federation. I am a member of the American Farm Bureau Federation Board of Directors and chairman of the Federation's Health Committee. I am not a doctor.

On behalf of the 1,325,000 farm families that compose the membership of the American Farm Bureau Federation, I want to express our appreciation for this opportunity to present our views with regard to pend-





## IN HAY FEVER

**HIGH**  
**Antihistaminic**  
**Potency**

**HIGH**  
**Index of Safety**

High antihistaminic potency, combined with a high index of safety and a relatively low incidence of side effects, recommend Neo-Antergan\* for prompt, safe, symptomatic relief in hay fever and other allergic manifestations.

In a recent clinical study<sup>1</sup> in which several leading antihistaminic compounds were employed, Neo-Antergan was found to have little or no sedative effect in the majority of patients, and became the favorite medication of ambulatory patients who were treated with more than one antihistaminic agent.

\*Neo-Antergan is the registered trade-mark of Merck & Co., Inc. for its brand of pyranisamine.

1. Brewster, J. M., U. S. Naval Med. Bull. 49: 1-11, January-February 1949.



Your local pharmacy  
stocks Neo-Antergan Maleate  
in 25 mg. and 50 mg. tablets,  
supplied in packages of 100 and 1,000.

# Neo-Antergan<sup>®</sup>

MALEATE

(Brand of Pyranisamine Maleate)

(N-p-methoxybenzyl-N',N'-dimethyl-N-α-pyridylethylenediamine maleate)

COUNCIL



ACCEPTED



MERCK & CO., Inc. *Manufacturing Chemists* RAHWAY, N. J.

ing proposals establishing a National Health Program. Ours is a national farm organization, with its membership on a farm family basis. Members pay dues voluntarily to finance the activities of the organization.

With the understanding that detailed consideration will not be given to the five bills on which hearings are being held—S. 1106, introduced by Senator Lodge, to provide assistance to the States in furnishing certain medical aid to the needy; S. 1456, introduced by Senator Hill; S. 1581, introduced by Senator Taft, to enact a National Health Act of 1949; S. 1679, introduced by Senator Thomas of Utah, to provide a program of compulsory national health insurance; and S. 1970, introduced by Senator Flanders of Vermont, to facilitate the broader distribution of health services—my statement to the committee will be general in character.

This statement is based upon the recent resolutions adopted by the forty-five State Farm Bureaus and the 1948 resolution of the American Farm Bureau Federation.

There is no disagreement as to the desirability of the highest medical service and best facilities obtainable. The difference of opinion comes in how best to attain these objectives. The individual farm family is fully aware of the privileges and responsibilities of American citizenship. They realize there is no escape from individual responsibility. They realize the necessity for rural and urban people alike to develop sound programs. No other group of our society holds more firmly than farmers to the idea that the Government should do for us only those things which we cannot do for ourselves.

Farmers believe that they themselves first should make every effort to solve the problem. Failing in this, then the community should help. If the problem is too big for the community, then the State should step in. The Federal Government should be called upon only as a last resort. Regardless of how much the Government puts into a health program, we will not solve our health problem if the individual family is not interested and if the family is not willing to work for better health.

Farmers have produced abundantly, knowing that a program of improved diets for the American people can contribute substantially to improving the health of our citizens and to the welfare of our country. They have come to realize the importance of feeding the soil proper mineral elements in the form of fertilizer in order to grow health-building foods. We have continuously supported an expanded School Lunch Program, realizing the value of food in the growth and development of children and realizing that illness in later life may be a direct result of improper nutrition during childhood. The farmers of the Nation, through their efforts to produce better foods and feed, have always demonstrated their interest in the health of the people of the Nation.

Farm people recognize that the quality of American medical service is very high. They are proud of the quality and availability of that service in most areas. Nevertheless, they are well aware that in some sections, service is not available, or at best, limited. Rural areas are generally less well supplied with physicians than urban areas. Knowing that this has partly resulted from lack of adequate professional facilities, the American Farm Bureau Federation supported enactment of the Hospital Survey and Construction Act of 1946. State Farm Bureaus throughout the country have been leaders in assisting State and local governments to take

advantage of the provisions of the Act in order that rural areas might be better served. While progress under this Act may be slower than some would desire, we nevertheless feel sure that it is a sound program which preserves the rights of the States and the people of the United States. It is they who decide under their own free initiative the extent of their participation in the program.

The Farm Bureaus have recognized promise in the long-range health education program carried out by the Agricultural Extension Service. We have urged the Land-Grant Colleges to expand this program to the extent that they have an extension health education specialist on their staff. This is important in teaching rural people the meaning of high standards in hospital and medical care. It is important to teach the advantages of budgeting the costs of medical need as they do other household expenses. They must know the significance of health hazards around the farm home as they pertain to disease, including the relationship between animal diseases and human health. They must know what services offered by public and voluntary agencies are available to them, and they must discover their own health needs and formulate their own programs.

As a means of encouraging such a program, county and State health councils have been set up by the people. Lay people, professional people, and organizations cooperating together can do much to solve their own health problems under such a program.

Farm people realize that they cannot have, nor do they expect to have, doctors and medical facilities as close to them as people in urban centers. They recognize that this is one of the disadvantages of living in the country—a disadvantage which has to be offset by the privilege of living out-of-doors, free from the health dangers of living in a congested area.

Recently I traveled through the sections of western Nebraska and South Dakota, which were blizzard-swept in the winter of 1949. From the second of January into March, the people of that area were snow-bound. Many babies were born. Yet, due to the ingenuity and resourcefulness of the people themselves and of the community, and with a minimum of national help, these babies were born in a hospital none the worse for a helicopter ride.

The American Farm Bureau Federation and the State Farm Bureaus have cooperated in cancer, tuberculosis, venereal disease, polio, crippled children, heart, and rheumatic fever programs. We sincerely hope that our efforts in furthering these programs have been of value in making all farmers conscious of the threat of these insidious diseases as well as the need of recognizing early symptoms—which, if recognized in early stages, may by treatment, prevent death.

The American Farm Bureau Federation has supported grants to states for maternal and child health programs, and programs to assist States in the expansion of needed public health services and facilities. We have insisted, however, that to the extent Federal grants are needed by way of assistance, such grants should be made to States on the basis of need, with State governments responsible for the allocation and administration of the funds made available. It is our firm conviction that the State and local authorities are best informed on local needs, and in them should be lodged the administration of such health programs. Thus, the American Farm Bureau Federation has favored the objectives of legislation providing that the Federal Government





## QUESTION:

When is it good practice to suggest "Change to Philip Morris Cigarettes"?

## ANSWER:

When patients under treatment for throat conditions persist in smoking, many eminent nose and throat specialists suggest "Change to Philip Morris"\* ... the *only* cigarette proved\*\* less irritating.

● *In fact, for all smokers, it is good practice to suggest "Change to Philip Morris."*

## PHILIP MORRIS

Philip Morris & Co., Ltd., Inc.  
119 Fifth Avenue, New York

**DO YOU SMOKE A PIPE?** . . . We suggest an unusually fine new blend — COUNTRY DOCTOR PIPE MIXTURE. Made by the same process as used in the manufacture of Philip Morris Cigarettes.

\*Completely documented evidence on file.

\*\*Reprints of published papers on request:

Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154; Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60; Proc. Soc. Exp. Biol. and Med., 1934, 32-241; N. Y. State Journ. Med., Vol. 35, 6-1-25, No. 11, 590-592.

should reasonably extend its public health programs with respect to public health services and medical care for those unable to provide such care for themselves. We insist at all times that the rights of the States to develop their own programs should be safeguarded.

We also urge that facilities of medical schools be expanded, and that every effort be made to train more physicians, surgeons, dentists, nurses, technicians, and general practitioners and public health doctors. We feel there can be no real solution to the health problem until sufficient men and women are trained to meet the need.

With the expansion of professional facilities now being made possible by the Hospital Construction Act, and looking forward to the education and training of additional men and women in the medical and dental fields, the important question remains to be resolved as to what type of program may best assure that rural people will be able to continue to secure needed medical and dental services. It is our opinion that this can best be accomplished through voluntary health insurance programs. This has been our view over the years. Nothing has happened recently to change the basis for this position.

The "pay as you go" system is not necessarily suited to the needs or convenience of many people. The solution seems to lie in group financing through voluntary membership in health insurance associations.

The degree of medical care should be improved and extended. It should be done in a democratic way—not by a program of compulsion which violates our most cherished heritage—that of individual initiative and freedom.

It is our feeling that the existing voluntary health insurance plans have demonstrated the merit and feasibility of such plans. Fifty-five million Americans are now covered under voluntary health-insurance systems, and thirty-seven million are insured against surgical and medical bills. This remarkable showing has been accomplished largely during the last twelve years. We believe it is a correct assumption that in time the established and successfully operating plans would go out of existence with the enactment of Federal legislation setting up a tax system for the support of a national health insurance program. On the other hand, under a carefully worked-out program of expanded activity, there is every reason to believe that coverage can be extended to include all but the indigent. Under any program, the latter group will always have to be considered separately.

I think we should bear in mind that medical, hospital, and related individual health care in this country are now the best in the world. We have reached this unique position through efforts made under democratic processes. The analyses of our present program have yet to prove that the program has failed. We oppose a national compulsory health program.

We oppose a national compulsory health program for four very definite reasons:

First, there are no facts to prove that there is a need for such a program.

Second, no country operating under a compulsory health program has as high a health standard as has this country.

Third, such a program would be prohibitive in cost.

Fourth, the people have not asked for such a program.

This does not necessarily mean that we should sit idly by and maintain the status quo. An expanded educational health program should be carried out. A great

deal can and should be done to extend coverage and benefits under voluntary health plans. A great deal can and should be done to further medical research; to further education in medical, dental, nursing, and related professions; to extend greater aid for maternal and child health, and crippled children's services and aid to the blind. We also favor continuation of aid for construction of facilities, including school facilities, to insure adequate professional services for all. These things are needed and can be done in our traditional way without a compulsory health insurance program.

In conclusion, let me emphasize again the importance of analyzing rather carefully the entire health problem and the need for any new program before we say that the old has not made sufficient headway. We should satisfy ourselves beyond a reasonable shadow of a doubt that a compulsory program will better the health of this nation. We should satisfy ourselves that in our attempts to raise our physical health standards, we do not lower our moral standards. Such a thing might well happen, and then the entire world would be sick.

### BIRTHS IN HOSPITALS

A greater proportion of births in the United States were delivered in hospitals or institutions in 1947 than in any previous year on record according to the Federal Security Agency.

The number of registered live births rose to a peak of 3,699,940 in 1947, and the proportion in hospitals reached a new high of 84.8 per cent.

An additional 10.1 per cent of births in 1947 were attended by physicians outside of hospitals and only about one out of twenty births were delivered by a midwife or other non-physician.

Since 1935, the first year that data of this kind became available, the percentage of total births delivered in hospitals has more than doubled, rising from 36.9 per cent in 1935 to 84.8 per cent in 1947, according to the report. This increase has been accompanied by a reduction in the proportion of live births delivered by physicians outside of hospitals, from 50.6 in 1935 to 10.1 per cent in 1947, as well as a decline in the percentage delivered by non-physicians, from 12.5 in 1935 to 5.1 per cent in 1947.

The report shows significant progress in recent years in the use of medical and hospital facilities by both the white and non-white groups, and by both the urban and rural population. Considerable differences exist between these groups in the extent to which hospitals are used for confinements. In 1947, almost nine in ten of the white births occurred in hospitals as compared with about one in two of the non-white births. Only 1.5 per cent of white births were attended by non-physicians, but almost a third of the non-white births were delivered by midwives or other non-physicians. The differences were less marked as between residents of urban and rural areas.

In 1947, there were eleven states in which 10 per cent or more of the births were attended by non-physicians and twelve states in which 25 per cent or more of the births occurred outside a hospital.



*SANDOZ CHEMICAL RESEARCH HAS DEVELOPED  
MANY NEW MEDICINALS*

Following full pharmacological study, substances showing promise of therapeutic value are subjected to extensive clinical investigation.

Representative of the many Sandoz "FIRSTS" IN THERAPEUTICS ARE:

**GYNERGEN**<sup>®</sup> (ergotamine tartrate): specific for migraine headache

**DIGILANID**<sup>®</sup> (lanatosides A, B & C): cardiac glycosides of *D. lanata*

**SCILLAREN**<sup>®</sup> pure cardiac glycosides of squill

**SANDOZ**



Every Sandoz product is uniform in purity and potency, assuring dependability of action.

SANDOZ PHARMACEUTICALS

Division of SANDOZ CHEMICAL WORKS, INC.  
NEW YORK 14, N. Y. • CHICAGO 6, ILL. • SAN FRANCISCO 8, CAL.

*Originality • Elegance • Perfection*

# MILWAUKEE SANITARIUM

WAUWATOSA, WISCONSIN

## FOR NERVOUS DISORDERS

Maintaining the highest standards for more than a half century, the Milwaukee Sanitarium stands for all that is best in the care and treatment of nervous disorders. Photographs and particulars on request.

(Chicago Office— 1117 Marshall Field Annex  
Wednesday, 1-3 P. M.)

JOSEF A. KINDWALL, M.D.  
CARROLL W. OSGOOD, M.D.  
WILLIAM T. KRADWELL, M.D.  
BENJAMIN A. RUSKIN, M.D.  
LEWIS DANZIGER, M.D.  
RUSSELL C. MORRISON, M.D.  
G. CHARLES SUTCH, M.D.  
RAYMOND HEADLEE, M.D.  
ARTHUR J. PATEK, M.D., *Consultant*  
G. H. SCHROEDER, *Business Manager*

COLONIAL HALL—One of the 14 Units in "Cottage Plan."



Missouri showed 80.7 per cent of births occurring in a hospital and attended by a physician; 17.5 per cent not in a hospital but attended by a physician, and 1.7 per cent not attended by a physician.

## THE PRESENT STATUS OF TUBERCULOSIS CONTROL

*Issued Monthly by the National Tuberculosis  
Association*

Today there are thousands of workers whose prime objective is the control of tuberculosis. A method of attaining that objective is known. It consists of finding and persuading each person with tuberculosis to seek medical care and providing his physician with the knowledge necessary to treat the disease effectively. In it is included restoring the individual to the fullest, and protecting others from contagion.

The control of tuberculosis involves acquiring new knowledge—research; and distributing existing knowledge—education. Education involves the public and the medical profession. The doctor in his office is impotent unless the patient comes to him. The patient is in jeopardy unless he knows that he is a patient, and unless the doctor knows how to treat him. These principles are inseparable. The physician and the health educator are mutually dependent and inseparable allies in the campaign against tuberculosis.

One of the ways in which the progress of tuberculosis control is being retarded is putting the emphasis upon accomplishments, not upon the unfulfilled tasks. To believe the job is nearly done is dangerous, and the facts should be faced.

Forget about the reduction in tuberculosis mortality statistics for a moment and look at the present situation! Tuberculosis, today in the United States, remains the most important chronic fatal disease to be caused by a "germ," the most important of all diseases of young people, the most important of the truly preventable diseases.

More than this should be said—much more. Mortality statistics list tuberculosis in comparison with groups of other diseases. "Heart disease" is not one disease but many. It includes arteriosclerotic heart disease of the aged, rheumatic heart disease of the young, hypertensive heart disease of middle life, infectious diseases of the heart, and many rarer conditions.

Cancer is not a single disease, presenting one medical problem. Yet the various cancerous diseases are grouped for comparison with tuberculosis. Most cancer appears to be a degenerative disease of older age; most deaths from heart disease are incident to old age. Everyone has to die some day from some cause and these degenerative conditions will increase as our people live longer and longer lives.

Tuberculosis is also displaced on the list of causes of death by accidental deaths of all types—obviously an unfair comparison. Tuberculosis would rank higher if mortality tables grouped diseases properly. If listed according to preventability, or to age groups affected or to years of potential life lost, or actual cost in dollars, or according to sorrow, hardship and frustration caused—there would be less complacency and more alarm at the present tuberculosis death rate.

If causes of death were listed according to organs affected, diseases of the lungs would stand high on the list. Diseases such as tuberculosis, asthma, bronchi-

ectasis and pneumonia stand high. Pulmonary embolism and, among males, cancer of the lungs are also extremely important.

There has been so much talk about scientific medicine that some people seem to think of medical practice as a technological pursuit—applying fixed formulas to compute the diagnosis. *Medicine is a ministry as well as a science, and the practice of medicine a calling as well as an occupation.*

Patients are people. They have intellect, imagination and emotions—they have souls. No two people react alike to the same disease and few human miseries are caused entirely by pathologic alterations of body structure. Symptoms are almost always caused by a blend of pathology with fear, apprehension, and perhaps fatigue. The majority of persons seeking medical advice have no significant organic disease. Their symptoms are due to misbehaving organs, not diseased organs. These complaints are called "functional" as distinguished from "organic" or structural defects. But functional complaints are real, not imaginary, and often they are curable. And when organic disease strikes—tuberculosis, heart disease, cancer—the emotional aspects, the functional disturbances are as real and often more disturbing than are the pathologic alterations. Even major surgery is to the normal person frequently more of an emotional than a physical experience.

The modern school of medical practice believes in full and complete instruction of the patient. He not only may, but must know the facts, good and bad. He is not the subject of medical treatment but the partner of his physician and shares the task of achieving recovery. Patients see their x-rays; they know about laboratory tests; they know the diagnoses and something of the future.


The modern physician sees a greater duty than that of restoring to a state of health people who feel ill. He advises normal well people how to remain well, happy, and productive. He is learning how to examine well people and to avert many of the tragedies which occur when his advice is sought belatedly. Through his knowledge of personal hygiene, immunization, nutrition, and the nervous system, he may prevent disease and interpret functional symptoms.

In the prevention of disease the physician has allied himself with public health experts, field workers, and executives. These are trained educators, inspired and diligent crusaders, who not only work beside the physician—they work ahead of him. They make possible the application of his skills and arts to vast numbers of people otherwise beyond the doctor's reach. Physicians should know more of these professional allies and the knowledge and training which they possess. He should use them as consultants in medical problems of social and community significance.

We are now on the right track to achieve the great task remaining—the control of tuberculosis. There are vastly more effective methods of detecting and treating tuberculosis and other chest diseases than ever before. The relative roles of health educators, epidemiologists, sanatorium physicians, private practitioners are beginning to be seen quite clearly. Let no disrupting revolution in medical practice prevent this major achievement of the progressive American system of medicine.

*The Present Status of Tuberculosis Control, H. Corwin Hinshaw, M.D., National Tuberculosis Association Bulletin, July, 1949.*





## Essential food factors

Several decades ago, vitamins, minerals, and other noncaloric but useful components of the diet were known as "accessory food factors." Today, it is recognized that these *accessory factors* are in fact *essential factors*.

Hypernutrition aids the recovery process and tends to hasten tissue repair. Vitamin A, vitamin D, thiamine (B<sub>1</sub>), riboflavin (B<sub>2</sub>), niacinamide, ascorbic acid (C) and folic acid have enjoyed wide usage for convalescent and reparative states.

*Lederle* has consistently advocated such use of the vitamins.

*Lederle*

LABORATORIES DIVISION

AMERICAN *Cyanamid* COMPANY  
30 ROCKEFELLER PLAZA  
NEW YORK 20, N.Y.

**COUNTY SOCIETY HONOR ROLL 1949**

(Societies which have paid Dues for All Members and date placed on Honor Roll)

Miller County Medical Society, December 8, 1948.  
Camden County Medical Society, December 10, 1948.

Benton County Medical Society, December 14, 1948.

Ste. Genevieve County Medical Society, December 16, 1948.

Laclede County Medical Society, December 18, 1948.

Dallas, Hickory, Polk Counties Medical Society, December 23, 1948.

Carter-Shannon County Medical Society, December 30, 1948.

Lewis, Clark, Scotland Counties Medical Society, January 3, 1949.

Audrain County Medical Society, January 5, 1949.

Webster County Medical Society, January 8, 1949.

Harrison County Medical Society, January 10, 1949.

Mississippi County Medical Society, January 12, 1949.

Howard County Medical Society, January 15, 1949.

Henry County Medical Society, January 16, 1949.

Morgan County Medical Society, January 19, 1949.

Callaway County Medical Society, January 21, 1949.

Carroll County Medical Society, January 24, 1949.

Pettis County Medical Society, January 26, 1949.

Holt County Medical Society, January 29, 1949.

Cape Girardeau County Medical Society, February 1, 1949.

Bates County Medical Society, February 8, 1949.

Mercer County Medical Society, February 8, 1949.

Pike County Medical Society, February 9, 1949.

Clinton County Medical Society, February 15, 1949.

St. Francois-Iron-Madison-Washington-Reynolds Counties, February 18, 1949.

Montgomery County Medical Society, February 24, 1949.

South Central Counties Medical Society, February 28, 1949.

Perry County Medical Society, March 10, 1949.

Andrew County Medical Society, March 12, 1949.

Cass County Medical Society, March 15, 1949.

St. Louis County Medical Society, April 27, 1949.

**SOCIETY PROCEEDINGS****EIGHTH COUNCILOR DISTRICT**

W. S. SEWELL, SPRINGFIELD, COUNCILOR

Seventy-five physicians attended an evening dinner meeting of the Eighth Councilor District at Wilders Cafe, Joplin, on July 12. The Jasper County Medical

Society was host at a most enjoyable social hour preceding the program.

Wallis Smith, M.D., Springfield, President of the Association, gave the opening talk on the program using the subject "A Few Things to Think About."

James A. Jarvis, M.D., Kansas City, spoke on "The Use of Aureomycin and Chloromycetin in General Practice."

Maxwell G. Berry, Kansas City, spoke on "Cardiac Arrhythmias: Their Treatment and Nontreatment."

Ray McIntyre, Field Secretary of the Association, spoke briefly on present efforts of the administration in Washington to bring physicians under the social security act via House Resolution 2893.

It was good to have our good friend Dr. Homer Kerr back in the saddle with us again and his few remarks were much appreciated.

W. S. SEWELL, M.D., Councilor.

**NINTH COUNCILOR DISTRICT**

E. C. BOHRER, WEST PLAINS, COUNCILOR

**South Central Counties Medical Society**

The South Central Counties Medical Society met for dinner at the Antlers Cafe in Mountain Grove on July 15 with the following members and visitors present: Drs. J. A. Fuson, Mansfield; R. A. Ryan, H. G. Frame, S. W. Connor and A. C. Ames, Mountain Grove; Garrett Hogg, Jr., Cabool; T. J. Burns, Houston; R. E. Musser, Willow Springs; E. C. Bohrer and C. F. Callihan, West Plains; Robert W. Maher, Springfield.

After dinner the meeting came to order in the office of Dr. Ryan and a motion picture entitled, "Cancer, The Problem of Early Diagnosis," gotten out by the American Cancer Society, was shown.

The minutes of the last two meetings were read and approved.

There being no speaker for the evening, an informal discussion of various subjects including Blue Cross and Blue Shield was held.

The meeting adjourned to meet in Cabool on August 19.

A. C. AMES, M.D., Secretary.

**BOOK REVIEWS**

INFANT NUTRITION, A Textbook of Infant Feeding for Students and Practitioners of Medicine by P. C. Jeans, A.B., M.D., Professor of Pediatrics, College of Medicine, State University of Iowa, Iowa City, and Williams McKim Marriott, B.S., M.D., Late Professor of Pediatrics, Washington University School of Medicine; Physician in Chief, St. Louis Children's Hospital, St. Louis. Fourth Edition. St. Louis. C. V. Mosby Company. 1947. Price \$6.50.

In the preface to their first edition of this book it was the authors' avowed purpose "to summarize present-day knowledge concerning the nutritional requirements of infants under normal and pathological conditions and to indicate the effects of failure to meet any or all of these requirements." Their success is attested by the demand for three succeeding editions. The fourth, and last, to date, reflects a similar endeavor to bring the most recent advances in this vital field of medicine to those concerned with the nutrition of infants.

The authors are cognizant of the fact that fundamental principles provide the framework for any scientific exposition. Consequently, the basic physiologic needs of the infant are given primary consideration, then the various methods providing for the fulfillment of these





# Dorsey *Going Your Way*








FOLLOWING a parallel route to a similar destination, the ethical pharmaceutical maker necessarily keeps the progress and direction of scientific medicine constantly in view.

For a closer look at medicine's progress and full comprehension of its implications, the Smith-Dorsey Company has expanded its research facilities, secured increased research grants and added research personnel.

THE SMITH-DORSEY COMPANY • Lincoln, Nebraska BRANCHES AT LOS ANGELES AND DALLAS



MANUFACTURERS OF  
AQUEOUS SUSPENSION OF ESTROGENIC SUBSTANCES • DORSEY  
AMINOPHYLLINE SUPPOSITORIES • DORSEY


1. HIGH IN PROTEIN—19%—as a result, a single ounce of Cerevim  provides 5½ grams of protein—plus:
2. THIAMINE—0.6 mg. per ounce of Cerevim  "The cumulative effects throughout a lifetime... (of thiamine)... may spell the difference between alert, successful living and a marginal effectiveness."<sup>1</sup>—plus:
3. NIACINAMIDE—6.0 mg. per ounce of Cerevim  in accord with The National Research Council's recommended allowance<sup>2</sup>—since "Nicotinic acid is found in natural foods only in limited amounts."<sup>3</sup>—plus:
4. RIBOFLAVIN—0.9 mg. per ounce of Cerevim  for this factor is directly related to growth<sup>4</sup> and is "essential to the defense powers of the organism"<sup>5</sup>—plus:
5. CALCIUM—300 mg. per ounce of Cerevim  thus supplying 8 times the calcium in a fluid ounce of milk—plus:
6. IRON—7.5 mg. per ounce of Cerevim  since "a child's increasing need for iron cannot safely be left to chance."<sup>6</sup>—plus:
7. COPPER—0.3 mg. per ounce of Cerevim  in the 1:25 ratio which Elvehjem, et al.<sup>7</sup> and Cason<sup>8</sup> found particularly effective in raising hemoglobin levels in infancy.


With such natural foods of high biologic value as:

8. WHOLE WHEAT MEAL 9. OATMEAL 10. CORN MEAL 11. NON-FAT MILK SOLIDS 12. BARLEY
13. WHEAT GERM 14. BREWERS' DRIED YEAST 15. MALT

Leading to such benefits as the literature<sup>9</sup> reports:

16. "increase in urinary output of riboflavin" 17. "improvement in pediatricians' scores" 18. "improvement in skeletal maturity" 19. "improvement in skeletal mineralization" 20. "retardation of increase in dental caries" 21. "recession of corneal vascularization" 22. "improvement in the condition of the gums"
23. Better Bowel Function<sup>10</sup>

24. PALATABILITY—Cerevim  makes all the above acceptable as well as available to infants and children.

in all—24 good reasons  
why CEREVIM  is  
a first among first foods

a pre-cooked cereal for professional specification now  
produced exclusively at the M & R Dietetic Laboratories

#### BIBLIOGRAPHY:

- (1) Harrell, R. F.: J. Nutrition 31:283 (Mar.) 1946.
- (2) National Research Council, Recommended Dietary Allowances, 1945.
- (3) Mc Lester, J. S.: Nutrition and Diet in Health and Disease, ed. 4, Phila., W. B. Saunders Co., 1943, p. 78.
- (4) Sherman, H. C.: Chemistry of Food and Nutrition, ed. 7, N. Y., Macmillan Co., 1946.
- (5) Council on Pharmacy and Chemistry and Council on Foods of the A. M. A.: The Vitamins, Chicago, American Medical Association, 1939.
- (6) Dickson, M. A.: Yearbook of Agriculture, U. S. Gov't Printing Office, Supt. of Documents, Washington, D. C., 1939, p. 203.
- (7) Elvehjem, C. A.; Siemers, A., and Mendenhall, D. R.: Am. J. Dis. Child. 50:28 (July) 1935.
- (8) Cason, J. F.: J. Pediat. 4:614 (May) 1934.
- (9) Urbach, C.; Mack, P. B., and Stokes, J., Jr.: Pediatrics 1:70 (Jan.) 1948.
- (10) Joslin, C. L., and Helms, S. T.: Arch. Pediat. 54:547 (Sept.) 1937.



needs are delineated. They have succeeded in simplifying the intricacies of formula feeding by imparting a clear conception of the underlying principles. The relation of infection to any feeding regime is given careful discussion, as is also the confusing panorama of symptoms arising from a faulty feeding program per se. The space devoted to vitamin deficiencies and allergy is a worthwhile inclusion.

Drs. Jeans and Marriott have handled a difficult subject well. The book is concise without being ambiguous, practical without sacrifice of detail. It is equally at home on students' and specialists' bookshelves. M. C. C.

**CLINICAL DIAGNOSIS OF LABORATORY METHODS.** By James Campbell Todd, Ph.D., M.D., Late Professor of Clinical Pathology, University of Colorado; and Arthur Hawley Sanford, A.M., M.D., Professor of Clinical Pathology, Mayo Foundation, University of Minnesota, Senior Consultant, Division of Laboratories, the Mayo Clinic; with the Collaboration of George Giles Stilwell, A.B., M.D., the Mayo Clinic, Eleventh Edition. 954 pages with 437 figures, 23 in color. Price \$7.50. Philadelphia. W. B. Saunders Co.

There is little to say about a textbook that has been a standard work for forty years (the first edition appeared in 1908) and that has gone on to eleven editions, except that every clinical pathologist considers it one of his best friends and keeps it near his microscope.

The new edition is necessary to keep up with recent advances in clinical pathologic methods. Medical mycology has been expanded, and many of the chapters have been rearranged and reviewed. A great improvement has been made in the illustrations, especially in dropping many of the old ones. New cuts and plates have been added to advantage. This book still remains a "must" for the clinical pathologist. R. L. T.

**REHABILITATION THROUGH BETTER NUTRITION.** By Tom D. Spies, M.D., From the Department of Internal Medicine, University of Cincinnati College of Medicine. Philadelphia and London: W. B. Saunders Co. 1947. Price \$4.00.

This small book, of eighty-three pages of text tables and illustrations, six and one half pages of references and two and one half pages of index, is a brief clinical treatise on the author's experience with nutritional deficiencies in Alabama. The greater part is devoted to descriptions of specific vitamin deficiencies. The special case history and physical examination form used by him is reproduced. Ten pages are given to therapy; this is not gone into in detail but rather emphasizes that deficiencies are nearly always multiple and that treatment is therefore chiefly dietary. Aside from use of synthetic vitamins for specific deficiencies, oral liver extracts and brewers' yeast powder are recommended as B complex supplements. T. R. J.

**PARENTERAL ALIMENTATION IN SURGERY, with Special Reference to Proteins and Amino Acids,** by Robert Elman, M.D., Associate Professor of Clinical Surgery, Washington University School of Medicine, St. Louis, Missouri. Paul B. Hoeber, Inc., New York. London. 1947. Price \$4.50.

Dr. Elman has presented in this excellent monograph (awarded the Samuel D. Gross Prize by the Philadelphia Academy of Surgery in 1945) a complete description of all the possible methods of intravenous therapy. He has gone into the pharmacology and physiology of the effects of glucose, saline and other electrolytes—written so that the average surgeon may determine the benefits and limitations. He has included thorough discussions of blood, plasma, amino-acids and vitamin injections.

The chapters on "Protein Needs" and "Parenteral Protein Administration" (amino-acids) are particularly well done and instructive. In them much can be learned concerning proper preoperative and postoperative care of seriously ill surgical patients. Bad "surgical risks" can be safely operated upon with more intensive parenteral feeding.

He concludes with a practical guide for proper parenteral alimentation in maintaining balance in post-operative care. He emphasizes the danger of overloading sodium chloride in too enthusiastic intravenous fluids (as previously described by Coller).

The book is the most up to date work on the subject, thorough but not too long (284 pages), and is strongly recommended by all who aspire to do surgery. It should be particularly useful to surgical residents who often have the responsibility of ordering postoperative fluids. E. K. R.

**MODERN CLINICAL PSYCHIATRY,** by Arthur P. Noyes, M.D., Superintendent, Norristown State Hospital, Norristown, Pa. Third Edition. Philadelphia. W. B. Saunders Company. 1948. Price \$6.00.

This is a textbook of psychiatry. The approach is a straightforward, didactic, descriptive, practical method of presentation. The author adheres to no particular school and does not feel impelled to exhort or deliver a message. Whether or not this is the best approach is a matter of opinion about which there will be many ideas. The student will perhaps not be as well satisfied as if he were given some formula that would cover all situations and elucidate all events. But probably whatever line of thought the future psychiatrist will choose to follow, he had best begin by learning certain fundamentals well, delaying his theoretic applications to a later time. If so this text should fulfill his purpose well. It is accurate and adequate and is clearly and simply written. With the information it imparts, the future specialist should always have a certain balance and breadth of view. L. B. A.

**MEDULLARY NAILING OF KÜNTSCHNER,** by Lorenz Böhler, translated by Hans Tretter. 374 pp., 1200 figures and illustrations. \$7.00. Baltimore. Williams & Wilkins Company. 1948.

This is an extremely well-written English translation of the third volume of Böhler's comprehensive work on fractures.

Long one of the foremost fracture surgeons in the world, Böhler's extensive experience with all methods of fracture treatment particularly qualifies him to evaluate a new technic.

Küntschner announced this innovation in fracture treatment in 1940. Böhler immediately adopted it and, after using the method in hundreds of cases, summarized his experience in this book.

The author is enthusiastic about the results in closed femoral fractures in the middle third. He feels the Küntschner nail can be safely, and sometimes advantageously, used in carefully selected transverse fractures of other long bones.

He does not believe healing occurs faster than with other methods, but states hospitalization is shortened and return to normal function hastened.

Detailed instructions are given in the technic of insertion of the nails as well as indications and contraindications. All procedures and instruments used are well illustrated. Drawings, reproductions of radiographs and case histories abound in the text.

This book will be of great interest to the orthopedic surgeon and others interested in fracture treatment, since it is the first text available in the English language dealing with Küntschner's nail.

It is required reading for the surgeon who wants to keep abreast of the newest methods of fracture treatment. R. M. O'B.

**OPERATIVE GYNECOLOGY**, by Harry Sturgeon Crossen, M.D., Professor Emeritus of Clinical Gynecology, Washington University School of Medicine; Consulting Gynecologist to the Barnes Hospital, St. Louis Maternity Hospital, St. Luke's Hospital, DePaul Hospital and Jewish Hospital, and Robert James Crossen, M.D., Assistant Professor of Clinical Gynecology and Obstetrics, Washington University School of Medicine; Assistant Gynecologist and Obstetrician to the Barnes Hospital and the St. Louis Maternity Hospital; Gynecologist to St. Luke's Hospital and DePaul Hospital. Sixth Edition entirely revised and reset. Thirteen Hundred Thirty-Four Illustrations Including Thirty in Color. St. Louis. C. V. Mosby Company. 1948. Price \$15.00.

One is impressed with the scope of treatment of the subject and the breadth of experience evidenced in this 1,000 page volume. From the opening chapter on "Myoma" through the entire book, the chapters impart valuable information. The photographs and illustrations are excellent.

Dealing with cancer, the authors have a definite course of action. For example, in malignancy of the corpus uteri, it is 1, 2 and 3; Radium, X-ray and hysterectomy. Their dealing with cancer of the cervix is just as definite and practicable.

Perhaps the bulk of surgeons doing general and gynecologic work depend upon the departments of radiology and anesthesiology to attend to these respective specialties. Detailed dosage and technic, thus, are mainly in their departments. Of course, a knowledge of these subjects is desirable and a part of the surgeon's education.

Through the book, there are useful warnings and advice as to how to avoid pitfalls. This applies to both mechanical safeguards and medico-legal bulwarks against legal action. The use of the continuous sponge and the proper position of the patient on the operating table are important. A knowledge of the responsibilities, specificity of procedure in surgery and numerous legal angles, is as much a part of the surgeon's armament as is the knife.

This is an excellent book both for reading and for reference.

F. H. W.

**FOOT AND ANKLE, THE, Their Injuries, Diseases, Deformities and Disabilities**, by Philip Lewin, M.D., Associate Professor of Bone and Joint Surgery, and Acting Head of Department, Northwestern University Medical School; Professor of Orthopedic Surgery, Post-Graduate Medical School of Cook County Hospital; Attending Orthopedic Surgeon, Cook County Hospital; Senior Attending Orthopedic Surgeon, Michael Reese Hospital, Consulting Orthopedic Surgeon, Municipal Contagious Disease Hospital, Chicago. With 389 Illustrations. Line Drawing by Harold Laufman, M.D., Associate in Surgery, Northwestern University Medical School. Third Edition, Thoroughly Revised. Philadelphia. Lea & Febiger. 1947. Price \$11.00.

As has been expressed by the author, Philip Lewin, this book is written primarily to present a clearer, concise description of all diseases common to the foot and ankle; however, conditions which are not so common also are included for the sake of completeness. The chapter, "Embryology and Anatomy of the Foot and Ankle," is excellent and, although it follows closely the text of a good anatomy book, function is emphasized more.

Common disorders of the foot and ambulatory treatment are presented in a practical and easily assimilable fashion. Fractures are discussed in detail, with emphasis on compound fractures as they were treated in World War II.

The subject of flatfoot is dealt with in detail so that anyone reading it could not fail to have a clear conception of the disturbance of the longitudinal arch. This book is an excellent reference text for anyone con-

cerned in general practice, general surgery, or orthopedics.

I. A. W.

**COMMUNICABLE DISEASES**, by Franklin H. Top, M.D., Medical Director, Herman Kiefer Hospital; Clinical Professor of Preventive Medicine and Public Health, Wayne University College of Medicine; Extramural Lecturer in Infectious Diseases and Epidemiology, School of Public Health, University of Michigan; Consultant, Preventive Medicine Section, Surgeon General's Office, United States Army and Collaborators. With 95 Text Illustrations and 13 Color Plates. Second Edition. St. Louis. C. V. Mosby Co. 1947. Price \$8.50.

This is an excellent presentation of the problem of communicable diseases, with many additions to the first edition, per se, and with the addition of fourteen new chapters by various collaborators. It should be quite valuable as a text because of its concise presentation as well as its excellent illustrations. To the general practitioner, the pediatrician and the public health physician it might well become a handbook.

R. E. D.

**BRIEF PSYCHOTHERAPY, A Handbook for Physicians on the Clinical Aspects of Neuroses**. By Bertrand S. Frohman, M.D., with the collaboration of Evelyn P. Frohman. Foreword by Walter C. Alvarez, M.D. Lea & Febiger. Philadelphia. 1948. Price \$4.00.

The book is very good as far as it goes and contains many helpful suggestions. But the various neurotic situations are oversimplified. The inexperienced practitioner and student who trusts the book too implicitly will find in practice that the average patient usually does not disclose the clear etiologic distortions pictured and entirely fails to respond to the various psychologic tricks when they are applied. The neurotic does not "get that way" from just a few traumatic experiences and rarely recovers at all completely or quickly. The best the doctor can do is to get him over the hump and start him off in the right direction, so he will be able gradually to work out most of his adjustments for himself.

The author's "active psychotherapy" is a step in the right direction but scarcely goes far enough. The home and personal contacts will need more intensive exploration than he suggests, the patient will need rest cures, sedatives and antacids; his diversions will need to be worked out and often he will require bits of advice on this and that for months to come. The "isolation," that complete change of physical and psychic environment, which accounts for most of what sanatoria accomplish is one of the most powerful therapeutic principles available, and cannot be ignored. Treating the neurotic is one of the most difficult tasks in medicine and one wonders if there is really any royal way through it. But the book does give students and practitioners a point of view few of them have and in so far as is useful.

L. B. A.

**DETAILED ATLAS OF THE HEAD AND NECK**. By Raymond C. Truex, Ph.D., Associate Professor of Anatomy, College of Physicians and Surgeons, Columbia University, and Carl E. Kellner, Artist, Department of Anatomy, College of Physicians and Surgeons, Columbia University. Published by Oxford University Press. 1948. Price \$15.00.

The authors of this fine medical publication are, respectively, associate professor of anatomy and artist at the College of Physicians and Surgeons, Columbia University. The atlas consists of 147 beautiful, full page drawings of the closely packed structures of the head and neck. The sequence permits the surgeon and student to reconstruct a three dimensional view of a given region. The sequence of illustrations from the skin to





if she is one

of your patients...

The farm housewife whose work is truly never done may find that the distressing symptoms of the climacteric make the smallest chore an arduous project. She depends on your help to resume normal efficiency in the performance of her daily tasks as well as to maintain a positive outlook during this trying period.

"Premarin" offers a solution. Many thousand physicians prescribe this naturally-occurring, oral estrogen because...

1. Prompt symptomatic improvement usually follows therapy.
2. Untoward side-effects are seldom noted.
3. The sense of well-being so frequently imparted tends to quickly restore the patient's confidence and normal efficiency.
4. This "Plus" (the sense of well-being enjoyed by the patient) is conducive to a highly satisfactory patient-doctor relationship.
5. Four potencies permit flexibility of dosage: 2.5 mg., 1.25 mg., 0.625 mg., and 0.3 mg. tablets; also in liquid form, 0.625 mg. in each 4 cc. (1 teaspoonful).



While sodium estrone sulfate is the principal estrogen in "Premarin," other equine estrogens...estrodial, equilin, equilinenin, hippulin...are probably also present in varying amounts as water-soluble conjugates.

# "PREMARIN"



ESTROGENIC SUBSTANCES (WATER-SOLUBLE,  
also known as CONJUGATED ESTROGENS (equine))

**Ayerst, McKenna & Harrison Limited** 22 East 40th Street, New York 16, New York

the vertebrae permits a correlation of the various layers of deeper and deeper dissections. The anatomy of the face, for instance, is exposed in planes which are unique in their clearness. In the series of figures on the cranial cavity and its contents, Dr. Truex's highly original dissections display the relations of the brain stem, cerebral nerves and vessels to meninges, foramina and fossae of the skull. He simultaneously displays the orbit and auditory apparatus, carrying the exposures down serially to the infratemporal fossa. The section dealing with inside of the nose progresses accurately to the pterygopalatine and parapharyngeal areas.

Lastly, the series of frontal and transverse sections are unique in the detail with which they portray the anatomy of the brain, head and neck to external landmarks. Most of the illustrations are life size and they are all beautifully and skillfully reproduced. This atlas of morphologic accuracy is recommended for the practitioner and student interested in understanding the complicated anatomy of the head and neck. L. H. F.

**DOCTORS OF INFAMY, The Story of the Nazi Medical Crimes,** by Alexander Mitscherlich, M.D., Head of the German Medical Commission to Military Tribunal No. 1, Nuremberg, and Fred Mielke. Translated by Heinz Norden, with statements by three American Authorities identified with the Nuremberg Medical Trial: Andrew C. Ivy, M.D., Vice-President, University of Illinois; Medical Scientific Consultant to the Prosecution, Military Tribunal No. 1, Nuremberg; Telford Taylor, Brigadier General, U. S. Army, Chief of Counsel for War Crimes; Leo Alexander, M.D., Psychiatrist, Consultant to the Secretary of War and to the Chief of Counsel for War Crimes; and a note on Medical Ethics by Albert Deutsch (including the new Hippocratic Oath of the World Medical Association). Illustrated with 16 pages of photographs. Henry Schuman. New York. 1949. Price \$3.00.

The authors of this book represented the legitimate medical interests in Germany. They compiled the proceedings of the medical war crimes and published them in German. The testimony is presented in chapters under such headings as "Cellulitis Experiments," and "Extermination of Racial Groups." Testimony of the witnesses brings out the almost inhuman acts performed under the guise of science. Introductory statements by Andrew C. Ivy, M.D., Telford Taylor, Brig. Gen., U. S. A., and Leo Alexander, M.D., succinctly

present the principles involved in human experimentation.

The defendants emphasized that they were part of a totalitarian system engaged in war, and that under these circumstances any atrocity could be justified. In the appendix the relationship of physician, patient and state is discussed. The outlook is indeed dismal for society in general when the physician needs subjugate himself to the state. R. L. L.

**CURRENT THERAPY 1949, LATEST APPROVED METHODS OF TREATMENT FOR THE PRACTICING PHYSICIAN.** Howard F. Conn, M.D., Editor. Consulting Editors: M. Edward Davis, Vincent J. Derbes, Garfield G. Duncan, Hugh J. Jewett, William J. Kerr, Perrin H. Long, H. Houston Merritt, Paul A. O'Leary, Walter L. Sturgis, Robert H. Williams. W. B. Saunders Company. Philadelphia and London. Price \$10.00

A board of twelve consulting editors selected more than two hundred contributors to this work. Selection was based on the contributor's knowledge of the management of a specific disease. The contributions are concerned only with the treatment of disease. In the consideration of most of the diseases more than one contributor presents his method of therapy. Although this multiple discussion method does present various approaches to a therapeutic problem and is stimulating to the reader, nevertheless, usually there appears to be general agreement on basic lines of therapy. This results in a certain amount of repetition; it would appear that an active reconstruction of the contributions, on the part of the editor, might have reduced the reading matter and thus added to the value of the book.

The subjects discussed include the infectious diseases; diseases of each specific bodily system; diseases of metabolism and nutrition; diseases of allergy; obstetric and gynecologic conditions. The section on skin diseases is particularly large.

This book was intended as a therapeutic desk reference book for the general practitioner, and has fulfilled the necessary requirements of context for this purpose. Since this work concerns itself with therapy alone it will be of most value to those who are completely familiar with the etiology, pathogenesis and disturbed physiology of the diseases with which it deals. C. J. S.



## The Mary E. Pogue School

Complete facilities for training Retarded and Epileptic children educationally and socially. Pupils per teacher strictly limited. Excellent educational, physical and occupational therapy programs.

Recreational facilities include riding, group games, selected movies under competent supervision of skilled personnel.

Catalogue on request.

G. H. Marquardt, M.D. Barclay J. Macgregor  
Medical Director Registrar

27 Geneva Road, Wheaton, Illinois  
(Near Chicago)



# *Mrs. Sipper is a Vitamin-Skipper*

Mrs. Sipper's *restricted* diet is somewhat lacking in essential nutrients. Through no fault of her own, she becomes sibling to the food faddist and first cousin to the hurrier, the worrier, the excessive smoker and toper. Their faulty or inadequate diets are a telling cause behind today's widespread prevalence of subclinical vitamin deficiencies.

In all of these cases, can newly prescribed eating habits carry the full brunt of the therapy? Isn't it wise to make use of the aid and assurance which vitamin supplementation can provide?

For your prescribing convenience, there's an Abbott vitamin product to serve nearly every vitamin need—for supplementary or therapeutic levels of dosage, for oral or parenteral administration. Your pharmacist can supply Abbott vitamin products in a variety of forms and package sizes. Abbott Laboratories, North Chicago, Ill.



*Specify*  
**ABBOTT VITAMIN PRODUCTS**



## What Makes Buzzie write Like this?

**BUZZIE** is just learning to write.

And every line he writes starts out with big letters and ends up with little ones.

The trouble is, he doesn't plan ahead. He concentrates on making those big letters, and lets the end of the line take care of itself.

Many grownups have the same trouble—not with their handwriting, but their money.

They blow it all at the beginning, and let the "end of the line" take care of itself. But it practically never does.

That's why the Payroll Savings Plan and

the Bond-A-Month Plan are such a blessing. They are "human-nature-proof."

When you're on one of these plans, the saving is done for you—automatically.

**And remember,** every U. S. Saving Bond you buy brings you \$4 in ten years for every \$3 invested.

So don't let your life run on like Buzzie's handwriting. Fix up the "end of the line" once and for all by signing up today for the Payroll Savings Plan—or, if you are not on a payroll, the Bond-A-Month Plan at your bank.

## Automatic Saving is Sure Saving — U.S. Savings Bonds



*Contributed by this magazine in co-operation with the Magazine Publishers of America as a public service.*

**Ad No. 418-C**





## THE LUZIER HAND SERVICE

You may not recall the color of your friend's eyes but you probably have a clear impression of her hands. The application of hand lotion before and after immersion in dishwater and after each washing helps to keep hands looking smooth and well-cared-for. Lubricate your nails when you change lacquer and postpone applying fresh lacquer until the next morning. Keep cuticles smooth and well-lubricated. In a sense, nail lacquer is not unlike costume jewelry—different pieces (shades) go with different ensembles for various occasions. The Luzier Hand Service includes an adequate group of preparations for the sensible care of your hands and adornment of your nails.

Luzier's Service also includes preparations for the cosmetic care of the face, hair and scalp, and body.

### Luzier's Fine Cosmetics and Perfumes Are Distributed in Missouri by:

#### Chilcutt and Chilcutt, Divisional Distributors

Box 774, Jefferson City, Missouri

##### DISTRIBUTORS

Pearl Jackson  
510 Woodlawn  
Mexico, Mo.

Bonnie Fox  
722 S. Jefferson  
Springfield, Mo.

Elva Gones  
305½ W. 4th  
Hannibal, Mo.

Verna Bell Prophet  
338 Landers Bldg.  
Springfield, Mo.

Ellou Hurst  
Box 194  
St. Charles, Mo.

Mildred Davis  
326 S. East Drive  
Macon, Mo.

#### Glenna Sanders, Divisional Distributor

4944 Murdock St.

Phone Plateau 4442

St. Louis, Mo.

#### Alpha Eade, Divisional Distributor

705 Olive Street, Room 511

Phone GA 5347

St. Louis 1, Missouri

##### DISTRIBUTORS

Mrs. Betty H. Crain  
5367 Gladstone  
Normandy 21, Mo.  
Phone GO 6714

Mrs. Betty Matheny  
1955 Hildred Ave.  
Jennings 21, Mo.  
Phone GO 1029

Rose Miller  
1121 Fullerton Bldg.  
122 N. 7th St.  
St. Louis 1, Mo.  
Phone GA 5335

Laura B. Roberson  
3412 Humphrey  
St. Louis 18, Mo.  
Phone LA 1833

#### Mrs. Dorothy Miller Rasche

215 So. Taylor  
St. Louis 10, Mo.

Formed for YOU by a team of  
Independent Professional Insurance  
Men to do the job YOU want done.



## The PROFESSIONAL MEN'S INSURANCE AGENCY

Box 781, Central Station, St. Louis



A complete line for clinical laboratories devoted to all branches of chemistry, bacteriology, hematology, and parasitology. Tested and checked in our own clinical laboratories. Purity warranted. Our facilities assure prompt shipment of large or small orders. Inquiries invited.

### COMPLETE CATALOG

Reagents catalogued alphabetically—also according to subjects and techniques, plus medical reference guide. Catalog comprises full line blood testing sera including anti-Rh, anti-M and anti-N; also reagents for Wassermann, Kline, and Kahn tests. Write for your copy. FREE ON REQUEST.

and Medical  
Reference  
Guide



## GRADWOHL LABORATORIES

R. B. H. Gradwohl, M. D., Director  
3514 Lucas Av. St. Louis, Mo.



Only \$26.50  
Complete

## COSMO CAUTERY COMPANY

4215 Virginia Ave.

St. Louis 11, Mo.

### COSMO CERVIX COAGULATOR

Cervical treatment by electro-coagulation with this unit is superior to other methods because the doctor can control the extent of coagulation and reach the deeply imbedded infections.

This unit will not create nauseating smoke and odor due to searing tissue and gives the doctor greater freedom of post-operative complications such as stenosis, excessive scar tissue, etc.

Furnished with leatherette carrying case and 3 interchangeable silver applicators for stripping, spotting and puncturing.

### COSMO CAUTERY UNIT

Removal of verucca, nevi, etc., with a Cosmo Cautery Unit provides a gentle, effective office treatment with a minimum of patient discomfort.

The unit is easy to operate; technic requires no anesthetic; heat is controlled and device shockproof. Usable around eyes and hairline; will not cause scar tissue.

Furnished with leatherette carrying case and 5 interchangeable silver applicators. The applicators are graduated in sizes to handle various sized blemishes and assure even sloughing.



Only \$22.50  
Complete

ONE YEAR GUARANTEE

Ask Your Dealer for Descriptive Literature

ST. LOUIS

A. S. Aloe Co.  
Hamilton-Schmidt Co.  
Edmund F. Hanley Co.  
Charles A. Schmidt Co.

KANSAS CITY

A. S. Aloe Co.  
Chas. Russell Co. Inc.  
Goetze-Niemer Co.

JOPLIN

Goetze-Niemer Co.

ST. JOSEPH

Goetze-Niemer Co.





# Daricraft Babies

More and more  
doctors are prescribing  
Daricraft Homogenized  
Evaporated Milk  
for babies . . . and for  
convalescent diets

Always uniform in quality, safe, steri-  
lized, high in food value and minerals.  
Contains 400 U. S. P. units Vitamin D  
per pint of Daricraft. Easily digested.



PRODUCERS CREAMERY CO., SPRINGFIELD, MO.

Advertisement



From where I sit  
*by Joe Marsh*

## For the Ladies: A Diet That Really Works

*We went out visiting the other night and the ladies were talking away about weight-reducing diets. One of them had a special "15-day Hollywood diet" guaranteed to slim her down fifteen pounds' worth. Another was living on bananas and skim milk!*

I might have known the missus would get the bug, too, and sure enough the other day she asks me, "Joe, what kind of a diet do you think I ought to go on?"

"Mother," I says, "the only diet I would ever recommend to anyone is simply moderation. I wouldn't trust any of those get-thin-quick diets. Simply cut down on desserts, bread, butter, sweets and fats—but when you do, even do your cutting down moderately."

From where I sit, moderation is the watchword. Moderation with food, with smoking or with the enjoyment of a friendly glass of temperate beer or ale. Actually, moderation adds to the enjoyment of just about anything.

*Joe Marsh*

Copyright, 1949, United States Brewers Foundation

AT HOME  
OR AWAY

SPOT  
TESTS

SIMPLIFY  
URINALYSIS

**No Test Tubes • No Measuring • No Boiling**

Diabetics welcome "Spot Tests" (ready to use dry reagents), because of the ease and simplicity in using. No test tubes, no boiling, no measuring; just a little powder, a little urine—color reaction occurs at once if sugar or acetone is present.

**Galatest... Acetone Test (Denco)**

FOR DETECTION OF  
SUGAR IN THE URINE

FOR DETECTION OF  
ACETONE IN THE URINE

**SAME SIMPLE  
TECHNIQUE FOR BOTH**

1. A LITTLE POWDER

2. A LITTLE URINE



COLOR REACTION IMMEDIATELY

A carrying case containing one vial of Acetone Test (Denco) and one vial of Galatest is now available. This is very convenient for the diabetic patient. The case also contains a medicine dropper and a Galatest color chart. This handy kit or refills of Acetone Test (Denco) and Galatest are obtainable at all prescription pharmacies and surgical supply houses.

Accepted for advertising in the Journal of the A.M.A.  
WRITE FOR DESCRIPTIVE LITERATURE

**Acetone Test (Denco)... Galatest**  
**The Denver Chemical Manufacturing Co., Inc.**

163 Varick Street, New York 13, N. Y.

**Cook County Graduate School of Medicine  
Announces Continuous Courses**

**SURGERY**—Intensive Course in Surgical Technique, Two Weeks, starting September 26, October 24, November 28.

Surgical Technique, Surgical Anatomy & Clinical Surgery, Four Weeks, starting September 12, October 10, November 7.

Surgical Anatomy & Clinical Surgery, Two Weeks, starting September 26, October 24, November 21.

Surgery of Colon & Rectum, One Week, starting October 10, November 28.

Esophageal Surgery, One Week, starting October 10.

Thoracic Surgery, One Week, starting October 3. Breast & Thyroid Surgery, One Week, starting October 10.

Fractures & Traumatic Surgery, Two Weeks, starting October 3.

**GYNECOLOGY**—Intensive Course, Two Weeks, starting September 26, October 24.

Vaginal Approach to Pelvic Surgery, One Week, starting September 19, November 7.

**OBSTETRICS**—Intensive Course, Two Weeks, starting September 12, November 7.

**MEDICINE**—Intensive General Course, Two Weeks, starting October 3.

Gastroenterology, Two Weeks, starting October 24.

Gastroscopy, Two Weeks, starting September 26, October 24.

**DERMATOLOGY**—Formal Course, Two Weeks, starting October 24. Informal Clinical Course every two weeks.

**ROENTGENOLOGY**—Diagnostic & Lecture Course First Monday of every month. Clinical Course Third Monday of every month. X-Ray Therapy every two weeks.

**UROLOGY**—Intensive Course, Two Weeks, starting September 26.

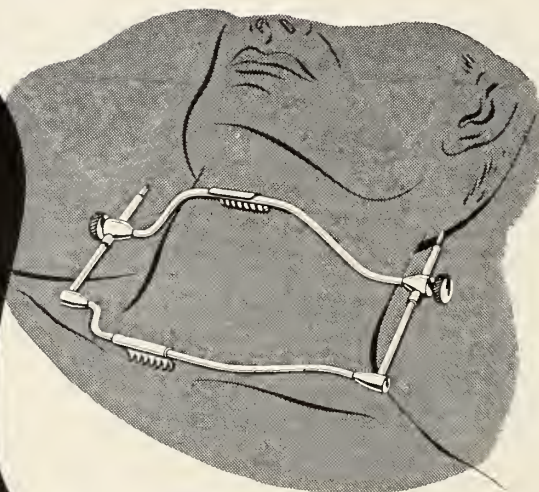
Ten Day Practical Course in Cystoscopy every two weeks.

GENERAL, INTENSIVE AND SPECIAL COURSES IN ALL BRANCHES OF MEDICINE, SURGERY AND THE SPECIALTIES.

**Teaching Faculty**—Attending Staff, Cook County Hospital Registrar, 427 South Honore St., Chicago 12, Ill.

**new!**

**Mahorner  
thyroid  
retractor**



**no handles  
recessed for unobtrusive use**

**No. A25253. Mahorner Thyroid Retractor,  
stainless steel, each.....\$39.50**

\* See New Orleans Med. & Surg. Jn'l., pages 10, 11,  
vol. 101, No. 1, July, '48.  
U. S. Pat. applied for.

**a. s. aloe company**

1831 Olive Street • St. Louis 3, Missouri

The Mahorner Thyroid Retractor makes for ease and efficiency in use. Designed so that the main portion of the instrument is recessed into the lateral spaces around the neck, the Mahorner holds the open skin and subcutaneous tissues securely.\* It has no handles to slip or impede an assistant. For easy, controlled adjustment an ingenious sustaining rod slides on a track and is locked by 2 thumb screws.





## FULL POTENTIALITIES OF THEOPHYLLINE THERAPY REALIZED ...

# SYNOPHYLATE

TRADE MARK

COUNCIL



ACCEPTED

BRAND OF

THEOPHYLLINE-SODIUM GLYCINATE

**DOSAGE BARRIER REMOVED:** Theophylline dosage can now be pushed to levels which provide the optimal benefits of the medication. SYNOPHYLATE\* is well tolerated: irritative effect on the gastric mucosa is minimized. Its high degree of solubility permits prompt absorption with rapid clinical effect.

**FLEXIBILITY OF DOSAGE:** Three dosage forms of SYNOPHYLATE facilitate adaptation of the medication to the needs of the individual.

**Tablets SYNOPHYLATE:** 0.33 Gm. (5 grains), equivalent to 0.165 Gm. (2½ grains) Theophylline U.S.P.; bottles of 100, 500, and 1,000. Tablets of 0.165 Gm. (2½ grains) also available.

**Syrup SYNOPHYLATE:** Each teaspoonful (4 cc.) contains 0.33 Gm. (5 grains) SYNOPHYLATE, equivalent to 0.165 Gm. (2½ grains) Theophylline U.S.P.; bottles of 1 pt. and 1 gal.

**Suppositories SYNOPHYLATE, Rectal:** Each suppository contains 0.78 Gm. (12 grains) SYNOPHYLATE, equivalent to 0.39 Gm. (6 grains) Theophylline U.S.P.; cartons of 12 foil-wrapped suppositories.

\*Trademark of The Central Pharmacal Co.

## THE CENTRAL PHARMACAL COMPANY

*Pharmaceutical Progress Since 1904*

SEYMOUR...



...INDIANA

THE  
W. E. ISLE CO.  
1121 GRAND AVE.  
KANSAS CITY, MO.



**TRUSSES**  
... Accurately fitted to assure complete protection and greatest possible comfort

ENTIRE SECOND FLOOR TELEPHONE VICTOR 2390

## Mullen Ambulance Company

PRIVATE AMBULANCE  
SERVICE

Local and Distant Trips  
Day or Night

5159 Delmar, ST. LOUIS Forest 1913

The Neurological Hospital,  
2625 The Paseo, Kansas City,  
Missouri. Operated by the Rob-  
inson Clinic, for the care and  
treatment of nervous and men-  
tal patients and associated  
conditions.

## FAITH HOSPITAL

A. J. SIGNORELLI, M.D.,  
*Medical Director*

GOodfellow 6262

2800 N. Taylor, St. Louis, Mo.

## The Norbury Sanatorium

Established 1901—Incorporated—  
Licensed—Jacksonville, Illinois

• ALBERT H. DOLLEAR, B.S., M.D., Superin-  
tendent. FRANK GARM NORBURY, A.M., M.D.,  
Medical Director. SAMUEL N. CLARK, M.D.,  
Physician. HENRY A. DOLLEAR, M.D., Physician.



### Maplecrest

• Pictured above — Restful, congenial home-  
like surroundings are combined with the most  
modern diagnostic and therapeutic equipment.



### Maplewood

• Pictured at left — Most comfortable homes  
for individuals requiring rest, scientific diagnosis  
and treatment. Fireproof construction.



# New Mosby Books



## DOCTOR AND PATIENT AND THE LAW

By LOUIS J. REGAN, M.D., LL.B.

Member State Bar of California; Professor of Legal Medicine, College of Medical Evangelists; Consulting Staff, Hollywood Presbyterian Hospital, Los Angeles, etc.

SECOND EDITION

545 Pages

PRICE, \$10.00

So frequent have malpractice claims become that, in some sections of the country, any patient with a less than perfect end-result is a potential malpractice claimant. This tendency to blame the attending physician, whenever there is dissatisfaction with the results obtained from medical treatment, is as vicious as it is alarming.

It is not the author's intention to supplant the services of an attorney when the need actually arises—but this book will be indeed helpful in preventing anyone in the practice of medicine from falling into legal pitfalls which by the very nature of his work he is unprepared to foresee. The book's essential purpose is to help medical men to understand the law, and to govern and protect themselves under it—and it will be a useful reference regardless of the medical history of any patient who may have become dissatisfied with your treatment.

## Handbook of DIGESTIVE DISEASES

By the late JOHN L. KANTOR, M.D., F.A.C.P., and ANTHONY M. KASICH, M.D., F.A.C.P., Lecturer in Medicine, Columbia University; Adjunct Physician, Montefiore Hospital; Assistant Visiting Physician, Bellevue Hospital; Assistant Adjunct Gastroenterologist, Lenox Hill Hospital, New York.

SECOND EDITION

658 Pages

149 Illustrations, 2 in Color

PRICE, \$11.00

Handbook of DIGESTIVE DISEASES is an outgrowth of Dr. Kantor's Synopsis of Digestive Diseases, the revision of which was interrupted by his death. In taking up the task of completing the work, Dr. Kasich has enlarged it immensely and rewritten it entirely. He has written with a two-fold purpose: First, to give a concise picture of the more vital and fundamental aspects of digestive diseases; second, the approach is on a sound physiological basis. The fact that gastroenterology is an important and inseparable segment of internal medicine has been stressed throughout.

It is an entirely clinical work with up-to-the-minute coverage. It contains a critical evaluation of the much discussed operation, vagotomy. The illustrations are exceptional and of real educational value. Many pictures are accompanied by an artist's drawing, a feature that offers explanations which wordy dissertations never accomplish. The bibliography is unusually extensive for a book of this size.

### -----ORDER FORM-----

The C. V. Mosby Company  
3207 Washington Blvd.  
St. Louis 3, Missouri

MoS 9-49

Please send me:

Kantor-Kasich's Handbook of DIGESTIVE DISEASES—2nd Ed.—\$11.00

Regan's DOCTOR AND PATIENT AND THE LAW—2nd Ed.—\$10.00

....Enclosed find check.

....Charge my account.

Name.....

Address.....

## ACCIDENT · HOSPITAL · SICKNESS

**INSURANCE**

For Physicians, Surgeons, Dentists Exclusively



<b>\$5,000.00 accidental death</b>	<b>\$ 8.00</b>
\$25.00 weekly indemnity, accident and sickness quarterly	
<b>\$10,000.00 accidental death</b>	<b>\$16.00</b>
\$50.00 weekly indemnity, accident and sickness quarterly	
<b>\$15,000.00 accidental death</b>	<b>\$24.00</b>
\$75.00 weekly indemnity, accident and sickness quarterly	
<b>\$20,000.00 accidental death</b>	<b>\$32.00</b>
\$100.00 weekly indemnity, accident and sickness quarterly	

Cost has never exceeded amounts shown.

Also Hospital Expense for Members  
Wives and Children

85c out of each \$1.00 gross income used for members' benefit

<b>INVESTED ASSETS</b>	<b>PAID FOR CLAIMS</b>
<b>\$3,700,000.00</b>	<b>\$15,700,000.00</b>

\$200,000.00 deposited with State of Nebraska for protection of our members.

Disability need not be incurred in line of duty—benefits from the beginning day of disability

**PHYSICIANS CASUALTY ASSOCIATION**  
**PHYSICIANS HEALTH ASSOCIATION**

47 years under the same management

400 First National Bank Building, OMAHA 2, NEBR.

**All worth while laboratory examinations; including—**

Tissue Diagnosis

The Wassermann and Kahn Tests

Blood Chemistry

Bacteriology and Clinical Pathology

X-Ray including Gastro-Intestinal Study and Gall Bladder Visualization

Basal Metabolism

Pregnancy Test

Electrocardiograms with interpretation

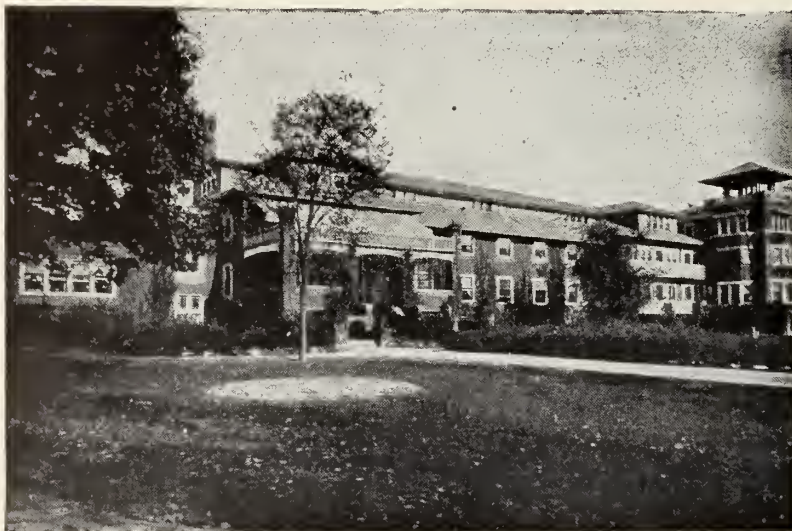
**National Pathological Laboratory**

RALPH L. THOMPSON, M.D., Director

601-616 University Club Bldg.

ST. LOUIS

Telephone JEFFERSON 6088

**North Shore  
Health Resort**

Winnetka, Illinois

*on the Shores of  
Lake Michigan*

A completely equipped sanitarium for the care of  
*nervous and mental disorders, alcoholism and drug addiction*  
offering all forms of treatment, including electric shock.

**SAMUEL LIEBMAN, M.S., M.D.***Medical Director*

225 Sheridan Road

Phone Winnetka 211



## CHECK LIST

*for choice of  
a laxative*

### Phospho- Soda (FLEET) TYPE OF ACTION

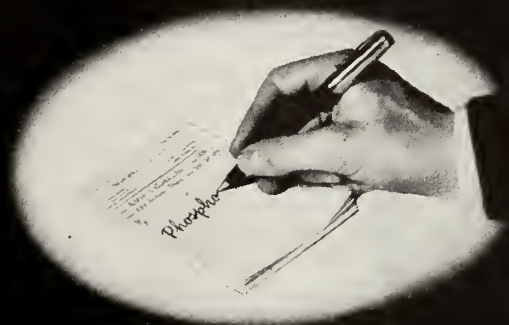
- ✓ Prompt action
- ✓ Thorough action
- ✓ Gentle action

### SIDE EFFECTS

- ✓ Free from Mucosal Irritation
- ✓ Absence of Constipation Rebound
- ✓ No Development of Tolerance
- ✓ Safe from Excessive Dehydration
- ✓ No Disturbance of Absorption of Nutritive Elements
- ✓ Causes no Pelvic Congestion
- ✓ No Patient Discomfort
- ✓ Nonhabituating
- ✓ Free from Cumulative Effects

### ADMINIS- TRATION

- ✓ Flexible Dosage
- ✓ Uniform Potency
- ✓ Pleasant Taste



## Judicious Laxation

...through freedom from  
undesirable side effects

The clinical preference for Phospho-Soda (Fleet)\* stems in large part from its freedom from undesirable side effects. This desideratum, together with its controlled action and ease of administration, assure safe, effective anticonstipative therapy from every prescription of this "tried and true" laxative agent. Clinical samples on request.

**C. B. FLEET CO., INC. • LYNCHBURG, VIRGINIA**

\*"PHOSPHO-SODA" and "FLEET"  
are registered trade-marks of C. B. Fleet Co., Inc.



**PHOSPHO-SODA**  
(FLEET)

®

Phospho-Soda (Fleet) is a solution containing in each 100 cc. sodium biphosphate 48 Gm. and sodium phosphate 18 Gm.

ACCEPTED FOR ADVERTISING BY THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

## COMMERCIAL ANNOUNCEMENT

FOR SALE: Cassette holder with stand; fits any type of standard type buckies or changes in present uses; one 5 x 7 film size, one 11 x 14 film size. Film developing hanger, one 5 x 7 and one 11 x 14. One Stero machine, 5 x 7. Contact Mrs. F. W. Linnert, 209 E. Main St., Warrenton, Mo.

FOR SALE: Office equipment and x-ray. All in perfect operating condition; much of it new; some unused. Latest style. One-third to one-half off regular price. Phone or write C. E. Gilliland, M.D., 5609 Cleveland Ave., St. Louis, Mo. Mohawk 5225.

**THE STOKES SANITARIUM** 923 Cherokee Road, Louisville, Kentucky

Our ALCOHOLIC treatment destroys the craving, restores the appetite and sleep, and rebuilds the physical and nervous condition of the patient. Liquors withdrawn gradually; no limit on the amount necessary to prevent or relieve delirium.

MENTAL patients have every comfort that their home affords.

The DRUG treatment is one of gradual Reduction. It relieves the constipation, restores the appetite and sleep; withdrawal pains are absent. No Hyoscine or rapid withdrawal methods used.

NERVOUS patients are accepted by us for observation and diagnosis as well as treatment.

E. W. STOKES, Medical Director. Established 1904  
Telephone—Highland 2101

Hair Permanently Removed by Electrolysis

**DOROTHY WORRELL, R.N.**

**233 Vandeventer, St. Louis**

**Telephone, Jefferson 9436**

*Work Done on Prescription of Physicians Only*



## COMPLETE Brace & Truss SERVICE

Complete line of braces and trusses  
—braces fitted by certified Ortho-  
dist—certified truss fitter, graduate  
of Cincinnati Truss School—lady  
attendant—individual and personal  
attention.

**HANGER** ARTIFICIAL  
LIMBS

1912-14 OLIVE STREET  
ST. LOUIS 3, MO.

## INDEX TO ADVERTISERS

Abbott Laboratories .....	671
Aloe, A. S., Company .....	676
American Meat Institute .....	624
Ames Company, Inc. ....	629
Arlington Chemical Co. ....	632
Ayerst, McKenna & Harrison, Ltd. ....	669
Camel Cigarettes .....	633
Camp, S. H., & Co. ....	648
Central Pharmacal Co. ....	677
Coca-Cola Company .....	630
Cook County Graduate School of Medicine .....	676
Cosmo-Cautery Co. ....	674
Denver Chemical Mfg. Co., Inc. ....	676
Duncan Laboratories .....	683
Faith Hospital .....	678
Fleet, C. B., Co., Inc. ....	681
Glenwood Sanatorium .....	632
Gradwohl Laboratories .....	674
Hamilton-Schmidt .....	636
Hanger, J. E., Inc. ....	682
Holland-Rantos Co. ....	635
Isle, W. E., Co. ....	678
Lederle Laboratories .....	663
Lilly, Eli, & Co. ....	Insert
Luzier's, Inc. ....	657
M & R Dietetic Labs., Inc. ....	666
Major Clinic .....	625
Massachusetts Indemnity Insurance Co. ....	674
Mead Johnson & Co. ....	684
Medical Protective Co. ....	636
Merck & Co., Inc. ....	657
Milwaukee Sanitarium .....	661
Mosby, C. V., Company .....	679
Mullen Ambulance .....	678
National Pathological Labs. ....	680
Norbury Sanatorium .....	678
North Shore Health Resort .....	680
Parke, Davis & Co. ....	622, 623
Philip Morris & Co. ....	659
Physicians Casualty Assn. ....	680
Pogue, Mary E., School .....	670
Producers Creamery Co. ....	675
Quincy X-Ray & Radium Labs. ....	636
Ralph Sanitarium .....	634
Robinson Clinic, Inc. ....	678
Sandoz Chemical Works .....	661
Schering Corporation .....	653
Searle, G. D., & Co. ....	647
Smith-Dorsey Co. ....	665
Stokes Sanitarium .....	682
U. S. Brewers Foundation, Inc. ....	675
U. S. Savings Bond .....	672
Wallace Sanitarium .....	630
Winthrop-Stearns, Inc. ....	627
Worrell, Dorothy .....	682
Wyeth, Inc. ....	631
Zemmer Company .....	636



*Your* **LABORATORIES**  
*Our* **RESPONSIBILITY**

CLINICAL PATHOLOGY  
PATHOLOGIC ANATOMY

**DUNCAN LABORATORIES**

*Established 1921*

909 Argyle Bldg. **KANSAS CITY 6, MO.**

230 Frisco Bldg. **JOPLIN, MISSOURI**

RALPH EMERSON DUNCAN, M.D.

MAURICE L. JONES, M.D.

In addition to diagnostic laboratory services, chemically accurate and clinically tested reagents, solutions, stains and culture media are available for immediate delivery.

# DEXTRI-MALTOSE

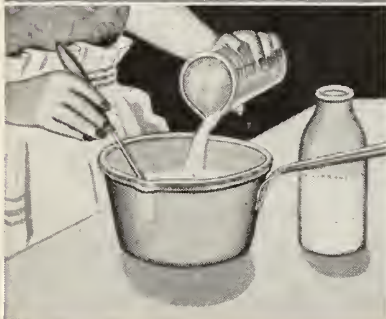
*Simple to use...*

## WITH EVAPORATED MILK

<b>1</b> Boil water.	<b>2</b> Stir in Dextri-Maltose while water is hot.	<b>3</b> Add evaporated milk and stir.
		

OR

## WITH WHOLE MILK

<b>1</b> Mix whole milk and water.	<b>2</b> Heat until almost boiling and stir in Dextri-Maltose.	<b>3</b> Boil gently for three minutes.
		

... FOR 38 YEARS COW'S MILK-DEXTRI-MALTOSE FORMULAS HAVE BEEN EMPLOYED BY PHYSICIANS TO MEET THE VARYING NUTRITIONAL REQUIREMENTS OF SICK AND WELL INFANTS. MEAD JOHNSON & CO., EVANSVILLE 21, IND., U. S. A.



# THE JOURNAL

*of the*  
MISSOURI STATE MEDICAL ASSOCIATION

VOLUME 46  
NUMBER 10

OCTOBER, 1949

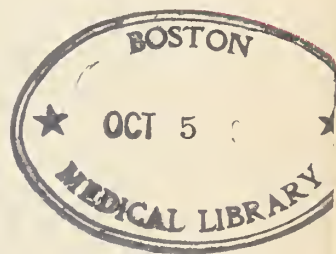
SINGLE COPY, 40 CENTS  
PER YEAR, \$3.00

## ORIGINAL ARTICLES

Symposium on Trauma  
George A. Aiken, M.D., Moderator

Symposium on Trauma  
W. A. Bloom, M.D., Moderator

The Issue of Compulsory Health Insurance



## EDITORIALS

Physician Heal Thyself  
Missouri State Medical Association Visits the  
Missouri State Fair

(Contents Index Page 689)



*Today,*

For more normal living, not only must the epileptic patient be freed as much as possible from recurring seizures, but his normal pursuits must not be interfered with by mental clouding and drowsiness.

# DILANTIN<sup>®</sup>

effectively suppresses or greatly reduces the frequency and severity of epileptic attacks and, at the same time, is relatively free from hypnotic side actions. There is little or no tendency to habituation; the dosage initially found effective usually remains so.

**PARKE, DAVIS & COMPANY**



# THE EPILEPTIC PATIENT CAN LIVE

*a more  
normal life*

Dosage of DILANTIN must necessarily be individualized. (For suggested dosage schedules, write for the brochure on DILANTIN.)

DILANTIN Sodium (diphenylhydantoin sodium, Parke-Davis) is available in 0.03 Gm. ( $\frac{1}{2}$  gr.) and 0.1 Gm. ( $1\frac{1}{2}$  gr.) Kapseals, in bottles of 100 and 1000.

DETROIT 32, MICHIGAN



# **CAMP** ANATOMICAL SUPPORTS

## for ORTHOPEDIC CONDITIONS



Whether it be relief from lesser degrees of postural or occupational strain, or as an aid in treatment following injury or operation, the Camp group of scientifically designed orthopedic supports for men, women and children will be found "comprehensive." Sacroiliac, Lumbosacral and Dorso-lumbar supports may be prescribed for all types of build. The Camp system of construction fits the support accurately and firmly about the major part of the bony pelvis as a base for support. The unique system of adjustment permits the maximum in comfort. Physicians may rely on the Camp-trained fitter for the precise execution of all instructions.

If you do not have a copy of the Camp "Reference Book for Physicians and Surgeons", it will be sent on request.



THIS EMBLEM is displayed only by reliable merchants in your community. Camp Scientific Supports are never sold by door-to-door canvassers. Prices are based on intrinsic value. Regular technical and ethical training of Camp fitters insures precise and conscientious attention to your recommendations.

**S. H. CAMP & COMPANY, JACKSON, MICHIGAN**

*World's Largest Manufacturers of Scientific Supports*

Offices in New York • Chicago • Windsor, Ontario • London, England



# CONTENTS

Symposium on Trauma. George A. Aiken, M.D., Marshall, Mo., Moderator .....	702	News Notes .....	728
Symposium on Trauma. W. A. Bloom, M.D., Fayette, Mo., Moderator .....	708	Musings of the Field Secretary .....	728
The Issue of Compulsory Health Insurance. Paul R. Hawley, M.D., .....	715	Deaths .....	728
President's Page .....	726	Miscellany—	
Editorials—		Tuberculosis Abstracts .....	730
Missouri State Medical Association Visits the		Industrial Health .....	732
Missouri State Fair .....	727	Society Proceedings .....	734
Physician Heal Thyself .....	728	Books Received .....	734
		Commercial Announcements .....	746

Entered as Second-Class Matter, February 18, 1925, at the Post Office at Fulton, Mo., under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1003, Act of October 3, 1917, authorized July 30, 1918. Business Office, 1201-5 Bluff St., Fulton, Mo., and 623 Missouri Building, St. Louis, Mo., Editorial Office, 623 Missouri Building, St. Louis, Mo. Return postage guaranteed. Printed by The Ovid Bell Press, Inc., Fulton, Mo.

## THE MAJOR CLINIC ASSOCIATION

3100 Euclid Avenue, Kansas City, Missouri

A Well  
Equipped  
Institution  
for the  
Treatment of  
Nervous and  
Mental  
Diseases and  
Alcohol  
Drug and  
Tobacco  
Addictions



Beautiful  
Location  
Large, Well  
Shaded  
Grounds,  
Spacious  
Porches,  
All Modern  
Methods for  
Restoring  
Patients to a  
Normal  
Condition

HERMON S. MAJOR, M.D.  
Medical Director

HERMON S. MAJOR, JR.  
Business Manager

**AMERICAN MEDICAL ASSOCIATION**

President, Ernest Edward Irons, Chicago.  
President-Elect, Elmer L. Henderson, Louisville.

Interim Session, Washington, D. C.,  
December 6-9, 1949

**MISSOURI STATE MEDICAL ASSOCIATION**

92nd Annual Session, St. Louis, March 26-29, 1950

President, Wallis Smith, Springfield.  
President-Elect, W. A. Bloom, Fayette.  
Vice Presidents, J. C. Creech, Troy; E. J. McIntire, Carthage;  
H. M. Henrickson, Popular Bluff.  
Speaker, F. T. H'Doubler, Springfield; Vice Speaker, Victor E. Scherman, St. Louis.  
Treasurer, C. E. Hyndman, St. Louis.  
Secretary, H. E. Petersen, St. Joseph.  
Editor, R. O. Muether, St. Louis.  
Secretary-Editor Emeritus, R. L. Thompson, St. Louis.  
Field Secretary, Raymond McIntyre, St. Louis.  
Assistant Editor-Business Manager, Helen Penn, St. Louis.  
Executive Secretary, Tom R. O'Brien, 623 Missouri Bldg., St. Louis.

**Delegates to the American Medical Association**

R. E. Schlueter, St. Louis, 1949-51; alternate, F. G. Pernoud, St. Louis. James R. McVay, Kansas City, 1949-1951; alternate, R. B. Wray, Nevada. W. L. Allee, Eldon, 1948-50; alternate, Paul Baldwin, Kennett. Howard B. Goodrich, Hannibal, 1948-1950.

**Standing Committees**

**Scientific Work**—A. N. Arneson, St. Louis, Chairman (1951); Victor B. Buhler, Kansas City (1952); H. E. Petersen, St. Joseph.

**Postgraduate Course**—M. Pinson Neal, Columbia, Chairman (1952); Carl R. Ferris, Kansas City (1952); Raymond O. Muether, St. Louis (1951); Edward Massie, St. Louis (1951); Guy D. Callaway, Springfield (1950). **Associate Members**—W. W. Tillman, Bolivar; Kenneth Glover, Mount Vernon; Paul O. Hagemann, St. Louis; D. L. Sexton, St. Louis.

**Publication**—R. O. Muether, St. Louis, Chairman; V. T. Williams, Kansas City; H. E. Petersen, St. Joseph; M. D. Overholser, Columbia; Paul O. Hagemann, St. Louis.

**Public Policy and Public Relations**—Armand D. Fries, St. Louis, Chairman (1952); J. W. Allee, Columbia (1950); F. R. Crouch, Farmington (1951); Howard B. Goodrich, Hannibal (1951); John Growdon, Kansas City (1950). **Associate Member**—Cyril W. Schumacher, St. Louis.

**Defense**—Charles E. Hyndman, St. Louis, Chairman (1951); Roland S. Kieffer, St. Louis (1950); L. F. Heimburger, Springfield (1950); O. B. Zeinert, St. Louis (1952); L. P. Forgrave (1952).

**Medical Education and Hospitals**—John S. Knight, Kansas City, Chairman (1951); F. T. H'Doubler, Springfield (1950); O. J. Gibson, Cape Girardeau (1952); D. M. Dowell, Chillicothe (1950); Oliver Abel, St. Louis (1952).

**Cancer**—E. C. Ernst, St. Louis, Chairman (1950); E. Kip Robinson, Kansas City (1951); Everett Sugarbaker, Jefferson City (1951); William E. Leighton, St. Louis (1952); Marvin Napper, Springfield (1952).

**Medical Economics**—Carl F. Vohs, St. Louis, Chairman (1950); Morris S. Harless, Kansas City (1951); C. T. Herbert, Cape Girardeau (1951); G. A. Aiken, Marshall (1952); A. P. Rowlette, Moberly (1952).

**Mental Health**—E. F. Hoctor, Farmington, Chairman (1951); Paul Hines, St. Louis (1950); Orr Mullinax, Jefferson City (1950); B. Landis Elliott, Kansas City (1952); Frank M. Grogan, St. Louis (1952).

**Maternal Welfare**—E. Lee Dorsett, St. Louis, Chairman (1952); Leo Hartnett, St. Louis (1952); J. L. Johnston, Springfield (1951); E. E. Wadlow, St. Joseph (1950); J. Milton Singleton, Kansas City (1950).

**Infant Care**—G. V. Herrman, Kansas City, Chairman (1951); Eugene Schwartz, Springfield (1951); H. E. Petersen, St. Joseph (1950); Peter G. Danis, St. Louis (1952); Park J. White, St. Louis (1952). **Associate Members**—Joseph C. Jaudon, St. Louis; Daniel B. Landau, Hannibal.

**Health and Public Instruction (McAlester Foundation)**—A. W. McAlester, III, Kansas City, Chairman (1950); M. K. Underwood, Rolla (1951); B. E. DeTar, Joplin (1951); Joseph Conrad, Chillicothe (1950); J. Earl Smith, St. Louis (1952).

**Constitution and By-Laws**—B. Landis Elliott, Kansas City, Chairman (1950); J. H. Summers, Lebanon (1951); John J. Hammond, St. Louis (1950); W. Logan Allee, Eldon (1952); H. O. Loyd, Jefferson City (1952).

Year indicates expiration of term.

**Fractures**—Daniel L. Yancey, Springfield, Chairman (1952); W. J. Stewart, Columbia (1951); N. S. Pickard, Kansas City (1951); W. R. Bohne, St. Louis (1950); J. Albert Key, St. Louis (1950). **Associate Members**—Jacob Kulowski, St. Joseph; B. L. Murphy, Hannibal.

**Conservation of Eyesight**—C. Souter Smith, Springfield, Chairman (1952); Robert Mattis, St. Louis (1951); A. N. Le-moine, Kansas City (1950); C. P. Dyer, St. Louis (1950); Robert S. Minton, St. Joseph (1952). **Associate Members**—Winfred L. Post, Joplin; Philip Luedde, St. Louis; John McLeod, Kansas City; G. J. Tygett, Cape Girardeau; S. L. Freeman, Kirksville; H. B. Stauffer, Jefferson City; E. D. Tenaglia, St. Louis.

**Control of Venereal Disease**—A. W. Neilson, St. Louis, Chairman (1952); W. S. Sewell, Springfield (1951); Charles Greenberg, St. Joseph (1950); Hugh L. Dwyer, Kansas City (1950); E. M. Cannon, St. Louis (1952).

**Industrial Health**—V. T. Williams, Kansas City, Chairman (1951); Horace F. Flanders, Kansas City (1951); E. M. Fessenden, St. Louis (1950); A. M. Ziegler, Kansas City (1952); R. A. Sutter, St. Louis (1952). **Associate Members**—R. Emmet Kelly, St. Louis; H. M. Roebber, Bonne Terre.

**Special Committees**

**Physical Medicine**—F. Garrett Pipkin, Kansas City, Chairman (1951); Emmett Settle, Rock Port (1950); Luke A. Knese, St. Louis (1950); A. J. Kotkis, St. Louis (1952); J. L. Washburn, Versailles (1952).

**Tuberculosis**—E. E. Glenn, Springfield, Chairman; Lawrence E. Wood, Kansas City; J. L. Mudd, St. Louis; Paul Murphy, St. Louis; C. A. Brashear, Mount Vernon; W. P. McDonald, St. Joseph; I. J. Flance, St. Louis; Florence E. MacInnis, Kansas City.

**Study of Cardiac Diseases**—A. Graham Asher, Kansas City, Chairman (1952); Drew Luten, St. Louis (1951); A. M. Estes, Jackson (1951); Julius Jensen, St. Louis (1950); Glenn W. Hendren, Liberty (1952). **Associate Members**—Horace W. Carle, St. Joseph; J. W. Fleming, Moberly; C. B. Davis, Nevada; Arthur Strauss, St. Louis; William I. Park, Springfield.

**Rural Medical Service**—R. W. Kennedy, Marshall, Chairman; A. E. Spelman, Smithville; J. W. Well, Palmyra; Martin M. Hart, Salem; R. B. Wray, Nevada.

**COUNCILOR DISTRICTS AND COUNTIES IN EACH DISTRICT\***

J. W. THOMPSON, St. Louis, Chairman

E. C. BOHRER, West Plains, Vice Chairman

**First District:** Councilor, Donald M. Dowell, Chillicothe. Counties: Andrew, Atchison, Buchanan, Caldwell, Carroll, Clay, Clinton, Daviess, De Kalb, Gentry, Grundy, Harrison, Holt, Livingston, Mercer, Nodaway, Platte, Ray, Worth.

**Second District:** Councilor, W. F. Francka, Hannibal. Counties: Adair, Chariton, Clark, Knox, Lewis, Linn, Macon, Marion, Monroe, Pike, Putnam, Ralls, Randolph, Schuyler, Scotland, Shelby, Sullivan.

**Third District:** Councilor, J. William Thompson. St. Louis: St. Louis City.

**Fourth District:** Councilor, Otto W. Koch, Clayton. Counties: Franklin, Jefferson, Lincoln, St. Charles, St. Louis County, Warren.

**Fifth District:** Councilor, J. F. Jolley, Mexico. Counties: Audrain, Boone, Callaway, Camden, Cole, Cooper, Gasconade, Howard, Maries, Miller, Moniteau, Montgomery, Morgan, Osage.

**Sixth District:** Councilor, R. W. Kennedy, Marshall. Counties: Bates, Benton, Cass, Cedar, Henry, Johnson, Lafayette, Pettis, St. Clair, Saline, Vernon.

**Seventh District:** Councilor, Edgar C. Virden, Kansas City. County: Jackson.

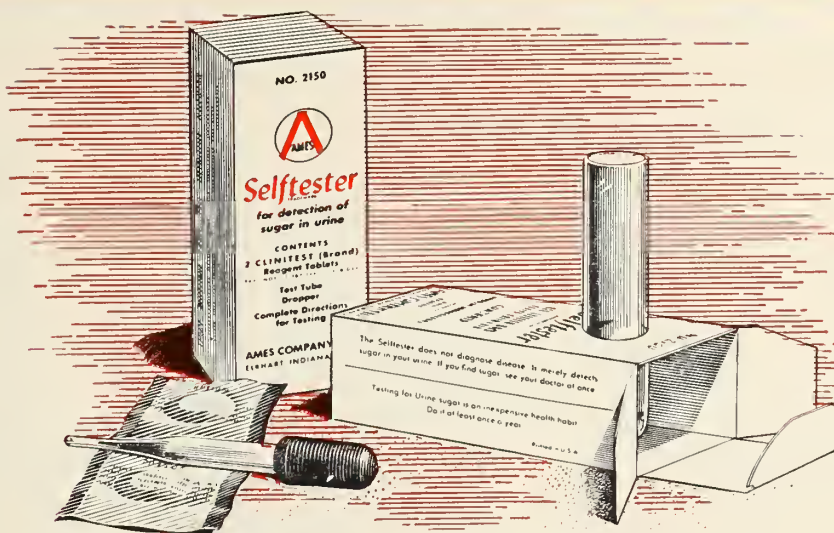
**Eighth District:** Councilor, W. S. Sewell, Springfield. Counties: Barry, Barton, Christian, Dade, Dallas, Greene, Hickory, Jasper, Lawrence, McDonald, Newton, Polk, Stone, Taney, Webster.

**Ninth District:** Councilor, E. Claude Bohrer, West Plains. Counties: Carter, Crawford, Dent, Douglas, Howell, Laclede, Oregon, Ozark, Phelps, Pulaski, Ripley, Shannon, Texas, Wright.

**Tenth District:** Councilor, Frank W. Hall, Cape Girardeau. Counties: Bollinger, Butler, Cape Girardeau, Dunklin, Iron, Madison, Mississippi, New Madrid, Pemiscott, Perry, Reynolds, St. Francois, Ste. Genevieve, Scott, Stoddard, Washington, Wayne.

Counties in italics are not organized





# For the public good

The health and well-being of at least 1,000,000 Americans depends upon their discovery and treatment as diabetics. The American Diabetes Association is directing the year-round Diabetes Detection Drive to find the "1,000,000 unknown diabetics" and guide them to their own physicians for treatment.

**THE AMES** ***Selftester*** **AT ALL DRUGSTORES**  
(TRADEMARK)  
brings those with glycosuria to you for diagnosis.

A simple home screening test for urine-sugar, the Ames Selftester® is a new approach to this detection problem. Like the clinical thermometer, it is sold directly to the public through drugstores. Also like the thermometer, it does not give a diagnosis, but only a warning.

#### *the directions state:*

1. The Selftester does not diagnose diabetes or any other disease. Its sole function is the detection of sugar (glucose) or sugar-like substances.
2. If reaction is positive, see your doctor at once. Sugar in your urine does not necessarily mean you have diabetes (nor does a negative result definitely exclude the presence of disease). But only your doctor, by medical examination and by additional laboratory tests, can tell why you show sugar.

THE AMES ***Selftester*** to detect } THE DIABETIC  
**CLINITEST®** to control  
Brand • Reagent Tablets

\*Approved by the Council of the American Diabetes Association and accepted for advertising in publications of the American Medical Association.

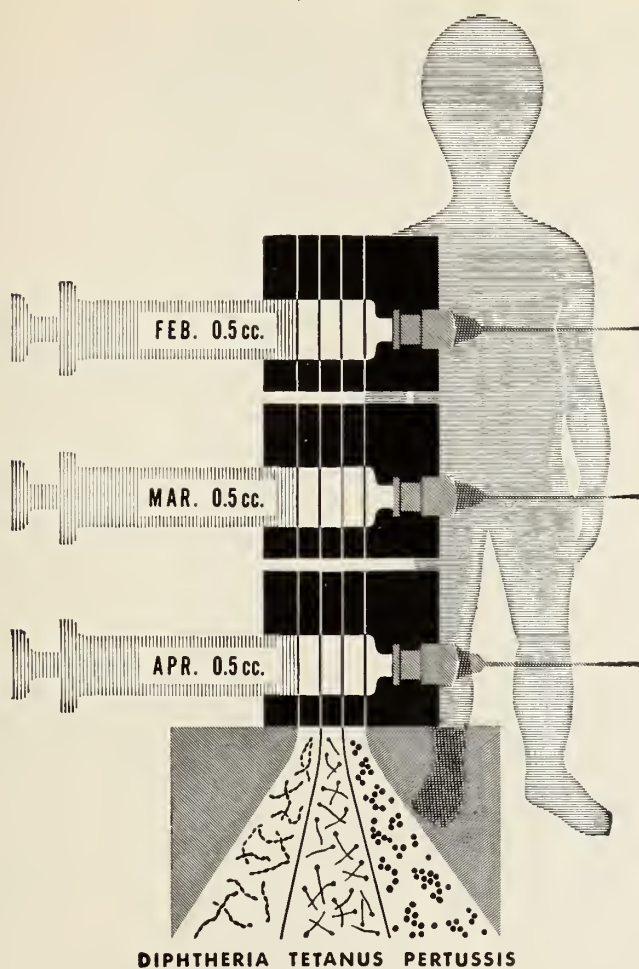


AMES COMPANY, INC • ELKHART, INDIANA

# County Societies in Affiliation with the Missouri State Medical Association

COUNTY	DISTRICT	PRESIDENT	ADDRESS	SECRETARY	ADDRESS
Andrew	1	V. R. Wilson	Rosendale	M. L. Holliday	Fillmore
Audrain	5	Glen P. Kallenbach	Mexico	Fred Griffin	Mexico
Barton-Dade	8	Rudolf Knapp	Golden City	Vern T. Bickel	Lamar
Bates	6	C. J. Allen	Rich Hill	John M. Cooper	Butler
Benton	6	T. S. Reser	Cole Camp	James A. Logan	Warsaw
Boone	5	James Baker	Columbia	Helen Yeager	Columbia
Buchanan	1	O. Earl Whitsell	St. Joseph	Joseph L. Fisher	St. Joseph
Butler	10	Frank E. Dinelli	Poplar Bluff	J. W. McPheeters, Jr.	Poplar Bluff
Caldwell-Livingston	1	Virgil D. Vandiver	Chillicothe	Charles M. Grace	Chillicothe
Callaway	5	R. B. Price	Fulton	R. N. Crews	Fulton
Camden	5	E. G. Claiborne	Camdenton	G. T. Myers	Macks Creek
Cape Girardeau	10	O. J. Gibson	Cape Girardeau	Charles F. Wilson	Cape Girardeau
Carroll	1	J. Morris Atwood	Carrollton	John H. Platz	Carrollton
Carter-Shannon	9	Harry Rollins	Winona	W. T. Eudy	Eminence
Cass	6	Herbert A. Tracy	Belton	O. B. Barger	Harrisonville
Chariton-Macon-Monroe					
Randolph	2	D. E. Eggleston	Macon	Henry K. Baker	Moberly
Clay	1	W. H. Goodson	Liberty	S. R. McCracken	Excelsior Springs
Clinton	1	Ronald E. Wilbur	Cameron	F. A. Santner	Lathrop
Cole	5	H. M. Wiley	Jefferson City	J. Paul Leslie	Jefferson City
Cooper	5	C. J. Tinscher	Boonville		
Dallas-Hickory-Polk	8	C. H. Barnett	Bolivar	John R. O'Brien	Bolivar
De Kalb	1			W. S. Gale	Osborn
Dunklin	10	Quinton Tarver	Kennett	E. L. Spence	Kennett
Franklin	4	Herbert H. Schmidt	Marthasville	F. G. Mays	Washington
Greene	8	Daniel L. Yancey	Springfield	Kenneth E. Knabb	Springfield
Grundy-Daviess	1	Joseph M. Quito	Trenton	E. A. Duffy	Trenton
Harrison	1	Merriam Gearhart	Bethany	W. A. Broyles	Bethany
Henry	6	S. B. Hughes	Clinton	R. S. Hollingsworth	Clinton
Holt	1	F. E. Hogan	Mound City	D. C. Perry	Mound City
Howard	5	Morris Leech	Fayette	Francis D. Dean	Fayette
Jackson	7	Carl R. Ferris	Kansas City	Kenneth E. Cox	Kansas City
Jasper	8	George H. Wood	Carthage	E. H. Hamilton	Joplin
Jefferson	4	Robert H. Donnell	Crystal City	George Hopson	DeSoto
Johnson	6	O. H. Damron	Warrensburg	Reed T. Maxson	Warrensburg
Laclede	9	H. W. Carrington	Lebanon	B. B. Hurst	Lebanon
Lafayette	6	Douglas Kelling	Waverly	Jordan Kelling	Waverly
Lewis-Clark-Scotland	2	J. R. Bridges	Kahoka	P. W. Jennings	Canton
Lincoln	4	H. S. Harris	Troy	J. C. Creech	Troy
Linn	2	Roy R. Haley	Brookfield	J. R. Dixon	Brookfield
Marion-Ralls	2	H. L. Greene	Hannibal	M. J. Roller	Hannibal
Mercer	1	T. S. Duff	Cainsville	J. M. Perry	Princeton
Miller	5			Carl T. Buehler, Jr.	Eldon
Mississippi	10	G. W. Whitaker	East Prairie	E. C. Rolwing	Charleston
Moniteau	5	K. S. Latham	California	L. L. Latham	California
Montgomery	5	E. J. T. Anderson	Montgomery City	S. J. Byland	Wellsville
Morgan	5	A. J. Gunn	Versailles	J. L. Washburn	Versailles
New Madrid	10	L. J. Smith	New Madrid	H. W. Carter	Portageville
Newton	8	H. C. Lentz	Neosho	J. A. Guthrie	Neosho
Nodaway-Atchison					
Gentry-Worth	1	Frank H. Rose	Albany	Charles D. Humberd	Barnard
North Central Counties					
Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam)	2	Spencer L. Freeman	Kirksville	John B. Jones	Kirksville
Ozarks Medical Society (Barry-Lawrence-Stone-Christian-Taney)	8	Fred Wommack	Crane	Kenneth Glover	Mt. Vernon
Pemiscot	10	E. L. Taylor	Steele	C. F. Cain	Caruthersville
Perry	10	J. J. Bredall	Perryville	L. W. Feltz	Perryville
Pettis	6	E. L. Rhodes	Sedalia	Carl D. Siegel	Sedalia
Phelps-Crawford-Dent					
Pulaski	9	A. A. Drake	Rolla	M. K. Underwood	Rolla
Pike	2	Eugene Barrymore	Bowling Green	Charles H. Lewellen	Louisiana
Platte	1	L. C. Calvert	Weston	H. Graham Parker	Platte City
Ray	1	L. D. Greene	Richmond		
St. Charles	4	J. M. Jenkins	St. Charles	Calvin Clay	St. Charles
St. Francois-Iron-Madison					
Washington-Reynolds	10	George L. Watkins	Farmington	Marvin T. Haw, Jr.	Bonne Terre
Ste. Genevieve	10	A. E. Sexauer	Ste. Genevieve	R. W. Lanning	Ste. Genevieve
St. Louis City	3	J. W. Thompson	St. Louis	S. J. Merenda	St. Louis
St. Louis	4	Paul R. Whitener	St. Louis	Robert C. Kingsland	St. Louis
Saline	6	James A. Reid	Marshall	Charles A. Veatch	Marshall
Scott	10	W. C. Critchlow	Sikeston	W. J. Ferguson	Sikeston
Shelby	2	D. L. Harlan	Clarence		
South Central Counties					
Medical Societies (Howell-Oregon-Texas-Wright-Douglas)	9	Garrett S. Hogg, Jr.	Cabool	A. C. Ames	Mountain Grove
Stoddard	10	H. A. Harris	Bloomfield	W. C. Dieckman	Dexter
Vernon-Cedar	6	William H. Allen	Nevada	Rolla B. Wray	Nevada
Webster	8	C. R. Macdonnell	Marshfield	E. G. Beers	Seymour





## SIMPLIFIED simultaneous immunization

"... a decrease in the number of injections will go far to make the practice of pediatrics more tolerable." (Fisher: J.A.M.A. 134:1064, 1947)

Office routine simplified . . . each injection is the same—0.5 cc.

Patient discomfort and reactions minimized

Lower expense for physicians and institutions

Easier injection because the product is exceptionally fluid

1.5 cc. vials — 1 complete immunization; 7.5 cc. vials — 5 complete immunizations.

**DIPHTHERIA**

and

**TETANUS TOXOIDS**

Alum Precipitated and

**PERTUSSIS VACCINE**

**COMBINED SQUIBB**

# for *Quick Action!*

in the Respiratory and Circulatory Emergencies  
of Intravenous Barbiturate Anesthesia.

*inject*



COUNCIL ACCEPTED

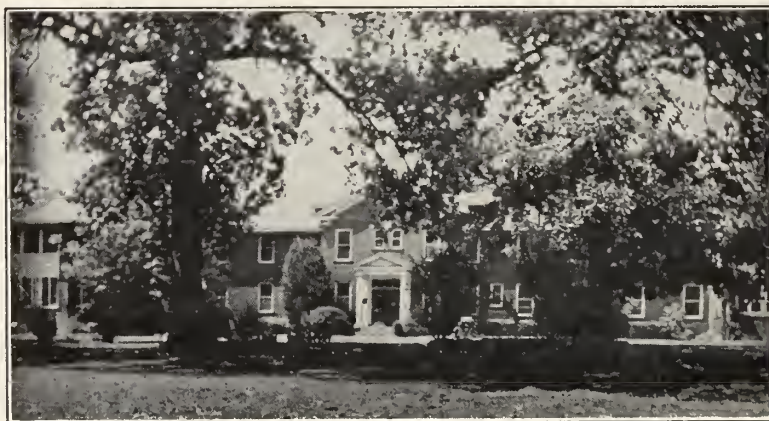
## *Metrazol*

*intravenously, intramuscularly, subcutaneously*

In respiratory and other emergencies resulting  
from medullary depression during anesthesia.  
Ampules 1 and 3 cc., tablets, solution, powder.

Metrazol, brand of pentamethylenetetrazol, Trade Mark Reg. U. S. Pat. Off., E. Bilhuber, Inc., Mfr.

## Bilhuber-Knoll Corp. Orange, N. J.



## THE WALLACE SANITARIUM

MEMPHIS, TENNESSEE

*For the Diagnosis and Treatment of  
Nervous and Mental Diseases, Drug Addiction and Alcoholism*





★ *Epileptic Men of Genius* ★

The brilliant English poet, Lord Byron, who had many mild convulsive attacks during his short life, is an outstanding example of the fact that epilepsy need not cloud a man's mentality.

Comparative studies have shown that in some cases better control of grand mal as well as petit mal seizures can be obtained with Mebaral than with corresponding doses of other antiepileptic drugs. Mebaral produces tranquillity with little or no drowsiness. It is particularly desirable not only in epilepsy but also in the management of anxiety states and other neuroses. The fact that Mebaral is almost tasteless simplifies its administration to children. Average dose for children  $\frac{1}{2}$  to 3 grains, adults 3 to 6 grains daily. Tablets  $\frac{1}{2}$ ,  $1\frac{1}{2}$  and 3 grains.

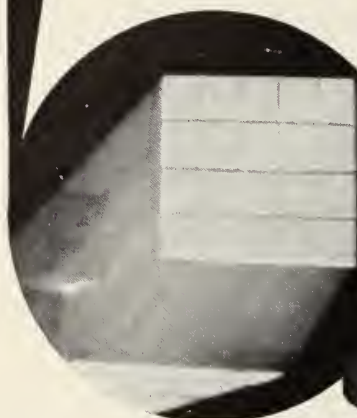
**MEBARAL®**  
Brand of Mephobarbital

*Winthrop-Stearns* INC.  
NEW YORK 13, N. Y. WINDSOR, ONT.

Mebaral, trademark reg. U. S. & Canada



## THIS BEAM OF LIGHT Shows What Rexair Can Do



Next time you house-clean, pause a moment by a sunlit window. You will see thousands of dust motes floating in the beam.

Light does not produce this dust. It is everywhere in the air you breathe. Conventional methods of cleaning often fail to eliminate it, by letting dust filter back into the air you breathe.

Wouldn't you like to clean *clean*? Wouldn't you like to know that the dust you remove from floors, carpets and furniture is eliminated from your house forever? You can—with Rexair.

Rexair has no bag. It uses a pan of water to trap dust and dirt. Wet dust cannot fly, and dust cannot escape from Rexair's water bath. You pour the water down the drain, and pour the dirt away with it.

**REXAIR DIVISION, MARTIN-PARRY CORP.**

**BOX 964, TOLEDO, OHIO, DEPT N-109**

**FREE BOOK**—Send for this colorful, illustrated 12-page book. Shows how Rexair does all your cleaning jobs, and even "washes" the air you breathe. Ask for all the copies you can use. No obligation.



# Rexair

## ST. VINCENT'S SANITARIUM

7300 St. Charles Rock Road—St. Louis (14), Missouri

General Hospital Facilities; Complete, modern, approved by A.M.A. and A.C.S.



Conducted by  
**DAUGHTERS OF  
CHARITY OF ST.  
VINCENT DePAUL**

### Moderate Rates

Located on 300 acres, much of which is landscaped and equipped for physical therapy. Homelike, pleasant atmosphere. Golf and tennis courts. Regulation motion pictures in auditorium. Television sets in recreation rooms.

### MEDICAL STAFF

Fifteen qualified neuropsychiatrists. (Each patient under care own psychiatrist.)

### CONSULTING STAFF

Full consulting staff.

### SPECIAL DEPARTMENTS

All modern therapies available, including **PSYCHOSURGERY**. Occupational and recreational therapies.

Affiliate School of Nursing.

Musical therapy by means of intercommunications systems. Patients whose condition permits are taken to Art museums, zoos, Municipal Opera, symphonies, sports events and other therapeutic activities.

**ACCOMMODATIONS:** Private Rooms. Private Rooms with Bath.

Adequate classification facilities according to type and severity of illness.

Acutely ill reside and receive treatments in air-conditioned units.

Correspondence Invited

• Constructive Cases Preferred

• Sister Administrator



30-DAY TEST REVEALED

*"Not one single case of throat irritation due to smoking Camels!"*



Yes, that's what throat specialists reported after making weekly examinations of the throats of hundreds of men and women from coast to coast who smoked Camels, and only Camels, for 30 consecutive days.

R. J.  
Reynolds  
Tobacco  
Co.,  
Winston-  
Salem,  
N. C.



According to a Nationwide survey:

*More Doctors smoke Camels*  
than any other cigarette

When three leading independent research organizations asked 113,597 doctors what cigarette they smoked, the brand named most was Camel!

# 50 and 2

## YEARS TREATING ALCOHOL AND DRUG ADDICTION

In 1897 Doctor B. B. Ralph developed methods of treating alcohol and narcotic addiction that, by the standards of the time, were conspicuous for success.

Twenty-five years ago experience had bettered the methods. Today with the advantages of collateral medicine, treatment is markedly further improved.

The Ralph Sanitarium provides personalized care in a quiet, homelike atmosphere. Dietetics, hydrotherapy and massage speed physical and emotional re-education. Co-operation with referring physicians. Write or phone.

*The*  
**RALPH**  
**SANITARIUM**  
*Established 1897*

Ralph Emerson Duncan, M.D.  
DIRECTOR



**529 HIGHLAND AVENUE • KANSAS CITY 6, MISSOURI**

Telephone Victor 3624



# Good Nutrition..

## A VITAL FACTOR IN THERAPY



The sound and wholesome nutritious diet is an integral part of modern day preventive and definitive therapy. A steady stream of adequate amounts of all the essential nutritional elements is vital for good growth, maintenance of tissue structure and functioning, healing after trauma, and resistance to infection. For maintaining this daily, steady stream of nutrients, however, conditions both in health and illness often make imperative the use of an efficient food supplement along with the diet.

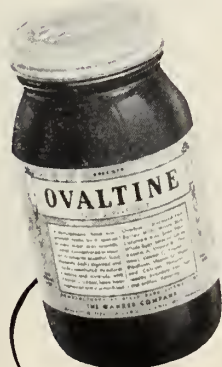
The *multiple dietary food supplement* Ovaltine in milk has wide usefulness for enhancing to full adequacy even nutritionally poor diets. Its rich store of vita-

mins and minerals includes vitamins A and D, ascorbic acid, thiamine, riboflavin and niacin, and calcium, iron and phosphorus. Its nutritionally complete protein has excellent biologic rating.

Since these vital nutritional values along with carbohydrate and easily emulsifiable milk fat are incorporated in liquid suspension or solution, Ovaltine in milk is also especially adapted to liquid diets. The highly satisfying flavor makes for its ready acceptability when foods are often distasteful.

The important overall nutrient contribution of three glassfuls of Ovaltine mixed with milk is presented in the accompanying table.

THE WANDER COMPANY, 360 N. MICHIGAN AVE., CHICAGO 1, ILL.



# Ovaltine

Three servings of Ovaltine, each made of 1/2 oz. of Ovaltine and 8 oz. of whole milk,\* provide:

CALORIES .....	676	VITAMIN A .....	3000 I.U.
PROTEIN .....	32 Gm.	VITAMIN B1 .....	1.16 mg.
FAT .....	32 Gm.	RIBOFLAVIN .....	2.0 mg.
CARBOHYDRATE .....	65 Gm.	NIACIN .....	6.8 mg.
CALCIUM .....	1.12 Gm.	VITAMIN C .....	30.0 mg.
PHOSPHORUS .....	0.94 Gm.	VITAMIN D .....	417 I.U.
IRON .....	12 mg.	COPPER .....	0.5 mg.

\*Based on overage reported values for milk.

Two kinds, Plain and Chocolate Flavored. Serving for serving, they are virtually identical in nutritional content.



# **RADIUM** (including Radium Applicators) FOR ALL MEDICAL PURPOSES *Est. 1919*

## **QUINCY X-RAY & RADIUM LABORATORIES**

(owned and directed by a Physician-Radiologist)

W. C. U. Bldg.

HAROLD SWANBERG, B.S., M.D., Director

QUINCY, ILLINOIS

## **HAMILTON-SCHMIDT SURGICAL COMPANY**

*St. Louis, Missouri*

[[ Surgical Instruments, Invalid and Sick Room Supplies ]]  
[[ Post-Operative Belts, Elastic Hosiery and Trusses Fitted ]]

Central 1680

REGISTERED NURSE IN ATTENDANCE 215 North Tenth Street

## **City View Sanitarium**

For the diagnosis and treatment of mental and nervous disorders, alcoholism and drug addictions.

Established in 1907 by the late John W. Stevens, M.D. 52 acres near city. Separate buildings for men and women. Two full time psychiatrists. Electric shock and insulin therapy in selected cases. Occupational therapy. Physiotherapy department. Adequate laboratory facilities.

**NASHVILLE, TENNESSEE**

*for Fifty Years*

**PROFESSIONAL PROTECTION  
EXCLUSIVELY**

**THE  
MEDICAL PROTECTIVE COMPANY  
FORT WAYNE, INDIANA**

ST. LOUIS Office: A. W. Breckenkamp, Representative, 623 Missouri Theatre Building, Telephone Newstead 0404



# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies  
Issued Monthly under direction of the Publication Committee

COPYRIGHTED, 1949, BY MISSOURI STATE MEDICAL ASSOCIATION. ALL RIGHTS RESERVED.

VOLUME 46

OCTOBER, 1949

NUMBER 10

R. O. MUETHER, M.D., Editor  
HELEN PENN, Assistant Editor  
623 Missouri Bldg., St. Louis, Mo. Telephone, Newstead 0404-05

PUBLICATION COMMITTEE	{	R. O. MUETHER, M.D., Chairman
		V. T. WILLIAMS, M.D.
		H. E. PETERSEN, M.D.
		PAUL O. HAGEMANN, M.D.
		M. D. OVERHOLSER, M.D.

### SYMPOSIUM ON TRAUMA

GEORGE A. AIKEN, M.D., *Marshall*, Moderator

Panel: JAMES BARRETT BROWN, M.D., *St. Louis*

A. P. ROWLETTE, M.D., *Moberly*

JACOB KULOWSKI, M.D., *St. Joseph*

F. A. CARMICHAEL, JR., M.D., *Kansas City*

GEORGE A. AIKEN, M.D., *MARSHALL*: The success of this symposium depends upon audience participation. In selecting these two panel discussions, the program committee has brought material together that is of interest, regardless of the field in which one practices. With that in mind, will you present questions to the panel?

The first question pertains to a highway accident victim who suffered a compound fracture of the mandible and lacerations involving the circulation in the neck. Dr. Brown, will you please discuss such a case?

JAMES BARRETT BROWN, M.D., *St. Louis*: A patient whose entire neck was ripped open and the mandible broken into about five major pieces and ten small pieces was brought into the hospital with his wound sewed closed, but he was bleeding to death and strangling from hemorrhage into his neck. His pharynx was being occluded by pressure of the blood. An attempt had been made, by simply suturing the wound, to control the blood flow to get him back to the hospital. Therein lies one of the main problems, especially in the neck, of controlling hemorrhage, and that is that it should be controlled locally. Going further down in the neck to tie off vessels or down in the neck from the face and tying off vessels will not stop the flow of blood in a facial wound. The bleeding has to be stopped locally. It can be stopped by clamping, of course, by tying the bleeders, by packing the wound. But if ties will not hold or packs will not suffice, then clamps should be left on bleeding points in the wound, especially if it is in the neck.

Distant neck ligation was talked about during the war in a lot of places but I have the impression that distant ligation of the neck vessels does not control hemorrhage up in the face. If in a hundred patients with bleeding faces the neck vessels were ligated at a distance from the bleeding area more damage than good might be done. Patients may be sent back, even in the hospital, with clamps sticking out of the neck and incorporated in the dressings, being sure that the bleeding is controlled locally. As far as bleeding down in the neck is concerned, as the doctor mentioned, one does the same thing; tie it off, if possible locally; if impossible, either firmly pack it so as not to occlude the pharynxes, or simply incorporate forceps right in the dressing that control the local bleeding points.

DR. AIKEN: Dr. Rowlette, how would you treat high tension burns of the hands?

A. P. ROWLETTE, M.D., *Moberly*: Most high tension burns of the hand will show an immediate blanching of the area directly affected; the skin will be white and there is an immediate necrosis of all the tissue, even including bone. High tension burns will show early necrosis of bone. The area that is involved directly will be white with a thin hyperemic border and there will be, in four or five days, a line of demarcation formed and gangrene ensue distal to the line of demarcation. Amputation should be delayed until the line of demarcation is clear and then a simple guillotine amputation of the involved part performed. This later can be skin grafted. The high tension burn, of course, will show some of the hemoconcentration that a

surface burn will show, but usually of a lesser degree.

DR. AIKEN: Dr. Kulowski, what important diagnostic points would enter into a fracture of the pelvis?

JACOB KULOWSKI, M.D., St. Joseph: Simple fractures without material displacements offer no particular problems. Crushing injuries often cause injuries to the bladder and other pelvic structures; disruption of one or both sacro-iliac joints with some separation at the symphysis pubis; gross bony displacements, and are sometimes associated with dislocation of the hip of the usual type or, centrally, through the acetabulum with or without fracture of the neck or trochanteric region. As a rule the presence of shock indicates that the pelvic injury is a severe one and one looks immediately for other injuries or local complications of the former. The history of the mechanism of injury is helpful in reconstructing the possibilities. A compound pelvic fracture is always serious and requires careful evaluation and surgical intervention. Prompt catheterization in all serious pelvic fractures is mandatory. The presence of gross blood in the specimen indicates further urologic study before anything else is done for the patient. Microscopic blood in itself merely warrants further observation along this line while definitive treatment is instituted for the fracture.

In regard to other gross elements of injury mentioned, one relies upon careful x-ray studies. However, separation of the symphysis pubis is often palpable. Furthermore, a unilateral upward displacement of one sacro-iliac joint is suspected from apparent shortening of the extremity on that side. A central dislocation of the hip is suspected when there is a depression of the trochanteric region associated with relaxation of the soft structures in this region. Along with this, there is concentric, painful limitation of motion. Associated hip dislocations present rather classical deformity, particularly when the dislocation is obturator or the more usual superior posterior type. In the former there is lengthening and external rotation while the latter gives shortening with flexion and internal rotation. Finally, one is dependent entirely upon x-ray examination in looking for fissure fractures of the sacrum as well as other fractures either anterior or posterior which are not accompanied by displacement.

DR. AIKEN: Dr. Carmichael, under what circumstances is surgery indicated in head injuries?

F. A. CARMICHAEL, JR., M.D., Kansas City: I think, like other surgical problems, the first and foremost consideration in head injury is the control of bleeding externally or the evacuation of internal bleeding. In the head, particularly, internal bleeding is usually more dangerous than external, that is, visible hemorrhage. That, of course, is predicated upon the recognition of the various well known hemorrhagic syndromes by which one most notably means the hematomas, subdural and extradural, acute and chronic. The

next indication for surgical interference is in the restoration of severe depression of the skull. I do not think all depressions need immediate attention and perhaps some of them are better left alone. This is decided, however, by the extent of the depression and somewhat to a lesser extent on its location. The next indication for operative interference which is met with commonly in civilian practice is the removal of foreign bodies. And the final indication for interference is to restore the normal contour in as much as possible. This is done not only for cosmetic reasons but also because compression of the brain or even absence of large sections of the calvarium, seriously interferes with the integral physiology of the brain.

DR. AIKEN: Dr. Kulowski, what is your concept of the use of intermedullary nailing in comminuted fractures of long bones?

DR. KULOWSKI: The only intermedullary nailing I have done has been for fracture of the neck of the femur. I can answer this question theoretically, perhaps. I can see one good indication for an intermedullary nailing of a long bone, particularly, the femur, and that would be in the case of severe burn or crushing of the soft parts when it would be difficult to use any of the better known types of traction or plating. In such cases, and I have seen one or two of those in my travels, an intermedullary nailing would be indicated.

DR. AIKEN: Dr. Carmichael, please discuss treatment of this accident: superior and posterior fracture, dislocation of the head of femur with subsequent foot drop. The patient also had temperature which resisted antibiotic treatment. The sciatic nerve had been explored at the time of closed reduction.

DR. CARMICHAEL: That is quite a problem. Presuming that the wound was compound at the time of injury, and the patient had immediate foot drop, I think perhaps the sciatic nerve should have been explored and if the wound was not too contaminated and if the orthopedist felt he could, probably some type of internal fixation carried out. If the wound is a closed wound and not compound, then I think a certain period of time should be allowed for spontaneous recovery before a procedure of the magnitude of sciatic exploration is carried out. I should say that if it is due to contusion of the nerve, function probably will be resumed within a few days or two weeks at the most. If function has not returned in that period of time, then I think, other things permitting, the condition of the wound and the fracture and general circumstances, that it should be explored.

DR. AIKEN: Dr. Brown, give the treatment of extensive first, second and third degree burns of the body.

DR. BROWN: With first degree burns, no requirement but cold cream or other protective applications and sedation is required and the process will be over in a few days.

Second degree burns that do not go clear through the skin are of practically the same anatomic



setup as the donor site after a split graft is removed and there are three essential points which are important in local care: prevent the new forming epithelium from being traumatized, by (1) bacteria, or (2) chemicals or by (3) mechanical trauma. For these reasons closing the wound as well as possible with a gentle dressing, using fine meshed gauze next to the wound and pressure fixation over the top of it, gives the best treatment. In the fresh state there is a question as to whether blisters should be opened or not and I feel that those that are going to open immediately anyway can be opened and gotten rid of at the time of the dressing. Over the hand, however, the blister comes under the thick epidermis and it may be left unopened.

For extensive third degree burns the same thing is done as on second degree burns; that is, keep them as clean as possible, and cope with the added trouble of getting rid of the sloughed skin. A simple philosophy may be used of getting the skin as clean as possible, as soon as possible, save as much skin as possible, and graft areas where the full thickness has been lost. An editorial comment may be added. It is possible that nobody associated with the care of severely burned patients has yet realized, other than the doctor and the patient, how serious large burns are. Insurance companies have not found out, hospitals have not found out and few surgeons who do not deal with burns have found out.

If a dressing is left on a fresh burn, only a second degree burn, too long, at the end of the period practically the whole area is going to be a third degree burn because of mechanical trauma and the bacterial trauma will prevent the healing of the wound. If only one thing were left in the armamentarium to take care of a burn, that one thing would be cleanliness, and gentleness. Soap and water, a lot of elbow grease, and being kind to the patient are necessary for the best results. Burn patients now usually are transported more quickly so that they are usually not too dirty. When this is so, one can go ahead with the treatment and cleaning under anesthesia and then wrap them up for protection. But at least we do not use a nonreversible method. In the old days of tannic acid and silver nitrate, the patient was committed. When coagulants were put on the wound, one had a nonreversible method of treatment. Tannic acid and silver nitrate were the two main offenders in that these chemicals killed out the oncoming struggling epithelium. If one could just remember that tannic acid is the same stuff that is used to make leather out of hides, then one would remember not to put tannic acid on babies' burned skin for instance.

For general treatment of these patients, they have all the symptoms of chronic shock, blood loss and blood chemistry that one can possibly imagine. This is too long a subject to go into at this time.

DR. AIKEN: Dr. Kulowski, a pedestrian is struck on the right hip by a moving car driving the head

of the femur through the astabulum and in the pelvis; your treatment, Doctor.

DR. KULOWSKI: This type of fracture is best treated conservatively. The simplest way to treat this so-called central dislocation would be by a combination of longitudinal and lateral traction. The longitudinal traction may be either a simple Buck's extension or by a Russell technic. The lateral component is obtained by a sling at the upper thigh with rope and pulley attachments going over the edge of the bed. Some authors employ a metallic fixation at the trochanter for the lateral pull. I have not found this to be necessary in my own cases. Occasionally one may substitute one or another of the well leg principles for the reduction, with or without a lateral pull. This is a more forcible correction, requiring skeletal means at the ankle on the affected side but has the advantage of permitting earlier partial mobilization of the patient. He may also be moved from the hospital at an earlier date.

Finally, one may in some cases reduce the fracture dislocation on a fracture table under general anesthesia and apply a spica and a half plaster following the reduction.

Two points need to be emphasized. One always checks for possible injury to the sciatic nerve and the great vessels prior to treatment. Secondly, manipulations per rectum are dangerous and should not be employed.

It is necessary to mention the most serious sequela following this type of injury, and that is the subsequent development of post-traumatic arthritis with or without an associated aseptic necrosis of the femoral head. These complications may perhaps be minimized by accurate reduction and adequate retention up to three months or more. Full weight bearing should be avoided for another three to six months during which time periodic x-ray check-ups are to be made, especially to determine whether or not an aseptic necrosis is developing. During this period of observation intensive physiotherapy and non-weight bearing activity is encouraged.

The development of irreversible manifestations of post-traumatic arthritis or aseptic necrosis of the femoral head is entirely an orthopedic problem and needs no further discussion at this time.

DR. AIKEN: This question was not directed to any specific person so, true to form, the general surgeon will get it. Dr. Rowlette, how do you treat crushing injuries of the extremities with extreme tissue damage and large serum pockets?

DR. ROWLETTE: I think the first question that always comes up in large collections of serum or blood is whether to aspirate or leave it alone. I think a conservative attitude is the best. If a collection of blood or serum is large enough, then aspiration might be considered. Certainly a badly traumatized extremity should be placed at rest in the most comfortable position possible, with cold packs, if there is tremendous amount of edema; the antibiotics certainly should be used,

penicillin, and aspiration if the localized collection of serum is large enough to cause extreme discomfort. But as a general rule a conservative treatment is best.

DR. AIKEN: We have a question for Dr. Kulowski. Discuss the length of time of immobilization in fractures at or near a joint, particularly the wrist and ankle. Is not early mobilization desirable to prevent a high percentage of ankylosis?

DR. KULOWSKI: This is easy to discuss in theory but the practical implications are resolved on the merits of the individual case. All are more or less agreed that early mobilization of joint fractures is indicated in order to obtain the maximum subsequent motility. This does not always mean that there will be obtained the best functional result. In other words, it will make some difference depending upon whether or not one is dealing with a non-weight bearing or weight bearing joint. For instance, in regard to fractures of the wrist, mobilization is to be encouraged as soon as there is sufficient callus to permit it; that is in from three to five weeks. On the other hand, fractures of the ankle, particularly the abduction form, always require at least three months immobilization because they have a tendency to slip into valgus. Here it is better to have accurate weight bearing alignment and some stiffness than to have a lot of motion and a valgus deformity. This principle regarding weight bearing joints cannot be over-emphasized. Therefore, in regard to ankle fractures, one utilizes for several months after the plaster has been removed some form of orthopedic bracing especially in the mentioned abduction forms of fracture dislocation.

Both wrist and ankle fractures tend, especially in older individuals, to be complicated by the so-called reflex Sudeck's atrophy. This is accompanied by pain and stiffness. When it occurs the treatment must be continued as a combination of immobilization and physiotherapy; along with other more modern injection and drug therapy.

DR. AIKEN: We have another question for Dr. Rowlette. Following traumatic shock, how soon and what kind of fluid do you give and why?

DR. ROWLETTE: It depends to a certain extent on the etiology of the shock. In a severe burn, say of 30 or 40 per cent, I would probably give 2 to 3 liters of plasma in the first twenty-four hours. That may not be adequate to relieve the chemoconcentration which will occur, but at least it will carry the patient and allow kidney function in the first twenty-four hours. If it were due largely to hemorrhage, I would immediately start with whole blood if the patient showed the typical picture of severe shock. If it were due largely to trauma, without hemorrhage, I think rest, heat and sedation to relieve any pain would be the primary indication. I do not believe that electrolytes will relieve shock as will colloids such as whole blood. Certainly experience during the war was that plasma was not adequate to relieve ordinary traumatic shock. It requires whole blood and whole

blood in the units of 1 to 2 in the ordinary case, 500 to 1,000 cc. But I would use blood to relieve severe shock. That is basic.

DR. AIKEN: This question is directed to Dr. Brown and Dr. Rowlette so we will have a symposium. Does carcinoma occur at the sites of old scars or burns? Does grafting help prevent the occurrence of carcinoma later on? Dr. Brown, will you answer first?

DR. BROWN: An old burn that has had constant wound stimulus over it for a period of years is quite apt to develop carcinoma. The most frequent sites are on the scalp where the wound cannot collapse and on the flank where heavy flexion and failure of collapse of the wound in healing leaves this continual wound stimulus. I think perhaps all can recall seeing carcinomas up and down the flank in burn scars. Certainly if these same wounds had been grafted so that the tissue did not stay in a state of continual wound stimulus, the carcinoma would not develop. In other words, one can go right back to his original philosophy, get the wound as clean as possible as soon as possible and put back what skin has been lost. As far as I know a repaired burn without continued tension or ulceration will never develop carcinoma except, of course, the usual average run of them.

DR. ROWLETTE: I think that answers the question.

DR. AIKEN: This question is directed to Dr. Kulowski and Dr. Carmichael. Could alcoholic block of lumbosympathetic chain conceivably assist in the take of bone grafting in the lower tibia?

DR. KULOWSKI: I cannot answer that question directly by inference from what is known about stimulus of growth following, let us say, lumbar sympathectomy. The Canadian school of orthopedic surgeons has shown that in many cases of anterior poliomyelitis in which considerable shortening, or disturbance of growth, was anticipated, early lumbar sympathectomies did stimulate growth. On that basis, I would say, off hand, that bone grafts would be helped by a similar type of increased peripheral circulation.

DR. CARMICHAEL: I would be inclined to agree with Dr. Kulowski. Theoretically, correct blockage of the lumbar sympathetics should increase the peripheral vascularity and if that is desirable under the surgical circumstances from the orthopedic standpoint because of some other unusual circumstances, ischemia or delayed or poor union of the graft site, then I should say that it is certainly theoretically not unreasonable to assume that sympathectomy or chemical sympathectomy by alcohol properly administered might be beneficial.

DR. AIKEN: This question is directed to Drs. Brown and Carmichael. A child's arm is pulled into a wringer. The lower roller continued to move until all the skin was necrotized into the arm pit. What type of skin graft is indicated? This same child had severe nerve damage at the same time, apparently from pressure. It could have been by stretching of nerves. When can we expect to get maximum recovery? Dr. Brown, please?



DR. BROWN: This is the first time I had heard of a wringer going clear up to the axilla. It must have been a pretty small child. All I have seen stopped down on the arm. But if the skin has been mangled so that a heat injury has occurred besides the pressure and tearing, that skin is not any good and one has to replace it. An immediate split graft could be considered to cover the area. This is only so if other elements are right for operation, however. If necessary, the patient could recover first and a secondary graft could be done. Split skin grafts usually are used on the axilla. In fact, the reconstruction of the axilla is the first place we used split grafts extensively. It is ideal to use there because there is a strong flexion that can withstand the tendency to contraction, and we described the use of this graft here instead of full thickness graft or flaps. As to the time to do it, it could be done immediately, which would be ideal. Otherwise, put the graft on secondarily. The question also should be answered, that if the flap is there but is torn loose and the skin is still viable should one take off the deep layers of the flap and use that skin for repair. That is logical to do but this question said the skin was necrotic so it would not be available. If Dr. Carmichael should have to go in and do something to the nerves, he has to have a healable tissue to work through. In other words, the deep healing cannot be any better than the surface healing and if this has to be done a free graft will not suffice. Then one does have to, in those instances, go back and put a thick pedicle flap over the area so the neurosurgeon can get in and out, with a thick enough surface available to allow the wound to heal, so that the nerve repair also will heal.

DR. CARMICHAEL: In regard to the nerve injury, I think one should follow the old military precept which I think must be correct, that the nerves involved, whatever they may be, should not be explored and certainly no attempt should be made to repair until the plastic department are in command of the situation and can absolutely totally close the skin. When that criterion has been met, then one should calculate by repeated examinations when recovery of the nerves would be expected. In a child it would be necessary to measure the arm where the highest lesion was, or was presumed to be, hoping of course that the brachial plexus was not avulsed in this injury and then, if the child does not show the proper recovery in that length of time, using the rule that in nerve injury there is about two weeks of latency when nothing happens whatsoever, followed by regeneration which is roughly at the rate of two to two and a half millimeters a day. If recovery does not follow in the prescribed length of time according to the thumb rule calculation and presuming that the plastic department is in command of the skin situation, then exploration is carried out.

DR. AIKEN: In multiple fractures of radius and ulna, not compounded, is it good practice to use medullary wire, Dr. Kulowski?

DR. KULOWSKI: Theoretically, intramedullary wiring should be helpful in this type of fracture, however, I have had no personal experience along this line. I might say that the greater the comminution there is in forearm fractures, the simpler it is to obtain length at least by the more conservative methods of traction and countertraction and plaster immobilization with or without the aid of skeletal means. In this type of injury it is always necessary to evaluate the neurocirculatory situation before and after treatment because of a tendency toward a complicating Volkmann's contracture.

DR. AIKEN: This is for Dr. Rowlette. What is your opinion of femoral vein ligation prophylactically in a patient to prevent pulmonary emboli in fracture of the femur, treated by either the open or closed method, in older patients?

DR. ROWLETTE: Regardless of the injury to the patient, the Massachusetts General group has shown that the anatomy of the deep veins of the thigh is extremely variable and it is impossible to be certain that one has ligated the deep branch of the femoral in any given case. Of course, if one is going to ligate them, one has to ligate both sides because oftentimes the embolus will arise in the noninjured extremity. With dicumerol available I certainly feel that is the method of choice in the prophylaxis of pulmonary emboli in any condition today. True, it requires regular prothrombin estimations but they can be done in any good laboratory and I would say that that is the method of choice rather than vein ligation.

DR. AIKEN: Dr. Brown, is skin grafting ever possible from one person to another?

DR. BROWN: Skin grafting is just as possible from one person to another as it is from one person to himself. The graft will take close to 100 per cent and we use them quite frequently under the heading of the emergency dressing of wounds in homografts. But in warm blooded animals homografts will not survive. They will be absorbed in from three weeks to about seven months. As far as we can make out, there is no single recorded instance in a warm blooded animal of a homograft surviving permanently except in identical twins. It will survive in identical twins.

DR. AIKEN: Dr. Kulowski, what is the proper procedure for an unreduced dislocation of the shoulder joint of a six weeks' duration?

DR. KULOWSKI: It so happens that six weeks is about the outer time limit that most authorities give for attempts at closed reduction. Sometimes, rarely perhaps, a six weeks' dislocation, particularly in an elderly individual, may be reduced by manipulation under general anesthesia. Of course, one must be careful about trauma to the vessels and nerves. If a guarded attempt at reduction at six weeks fails, some form of operative procedure may be indicated. I say may be indicated because there are some individuals, especially in the older age groups, who become functionally adjusted to the dislocation and in these a surgical procedure is

hardly warranted. On the other hand, where there is local and, or, neurocirculatory disorder, operation should be performed. In the order of precedence, the operation to be performed is: exposure and simple reduction, with or without a Bankart or Nicola procedure; a Jones type of reconstruction and, in rare instances, a resection or fusion.

DR. AIKEN: Here is another. Is Whitman's abduction and body spica indicated in present day surgery for fractures of the hip, both intracapsular and intratrochanteric? If so, at what ages?

DR. KULOWSKI: From the standpoint of lowered mortality, immediate results and economic standpoint, the modern methods of internal fixation for transcervical fractures are preeminently to be preferred. It is, however, a well known fact today that these methods have a considerable subsequent morbidity. For that reason alone one should not wholly discard the Whitman method, especially in those cases in which physical condition prohibits surgery. Furthermore, the Whitman method should be learned and perfected in rural areas where operative methods are not practicable. Not so long ago, Leadbetter (1938) emphasized this point and gave substantial statistics to back it up.

We are accustomed to consider these fractures as occurring only in the more or less aged individuals, and considerable emphasis has been placed on their poor general condition. Occasionally these injuries occur in children. Here a paradoxical situation results. The general condition is good, but the morbidity of the fracture is great. In other words, it is difficult to obtain a good anatomic result from either operation or cast treatment alone. I suggest here that both internal and external fixation be done.

In regard to trochanteric fractures, the Whitman method has been superseded by internal fixation or some form of well leg principles, such as the Roger Anderson or Jones splint method. Here, again, operation is to be preferred in any case that can tolerate surgery. I find it necessary in some cases to use a well leg reduction as a preliminary measure which is then followed by internal fixation; quite easily accomplished under such circumstances. A not infrequent complication of the well leg principle is the perineal paralysis on the affected side.

Finally, the crowded conditions of most hospitals today preclude almost any plaster methods which require considerable nursing care and prolonged use of hospital beds.

DR. AIKEN: Dr. Carmichael, the patient complains of pain in the sciatic region, especially the region within two inches of the ankle joint. This patient has had extension and sciatic injection with no result. The patient has hypertension of 225/110 and is 60 years of age. What do you suggest? There are no symptoms of cord tumor.

DR. CARMICHAEL: That is quite a problem. With that symptom complex, even though the pain is low and it may be spotty or confined to one definite area low in the extremity without continuity of

sciatic radiation, it still must be considered that the pain being there is mediated through the sciatic apparatus in general. And, therefore, some specific impingement of the sciatic nerve or one of its component rootlets must be investigated. I could think that it would be necessary to exclude the possibility of the most common thing, of course, protrusion of a lumbar intravertebral disc. And that should be done by myelography. Now that presents two other rather unpleasant considerations. If such protrusion is proven, a lady at 60 with that blood pressure is not a joy even to a neurosurgeon and you would still be in the deep as to making a surgical decision in the matter. However, if the myelography was conclusive, I should say probably she should be explored and treated regardless of the hypertension if she is suffering intense intractable pain. If the myelography is negative and there are no other clinical clues to tell you the source of this pain, then one is more or less up against it and must resort to whatever means at his disposal to make the patient somewhat happier. I think we should condemn sciatic injection. I do not believe that is a good method of treatment. I think it has horrible consequences sometimes and although the sciatic nerve is rather difficult for most people to hit with a needle, they sometimes do and all manner of solutions have been injected into it with rather disastrous results, leading finally to deformity and disability in the extremity which is a residual in existence long after, many times, the original pathologic situation is cleared up.

DR. AIKEN: Dr. Kulowski, in an adult wires were placed around the humerus to hold a comminuted fracture. After healing without refractures, should or should not the wires be removed?

DR. KULOWSKI: If there is no infection and a modern type of stainless steel wire has been used (18-8 SMO) there is no need for removal of wire which has been used in an adult comminuted fracture. There are some, however, who argue that all forms of internal fixation should be removed when sufficient callus has become evident. Their argument is that any metal may, and often does, inhibit or retard healing. On the other hand, where wire has been used in the vicinity of epiphyses in young growing children, they should be removed lest further growth disturbances result. It is far better in the latter instances to avoid any type of metallic internal fixation if possible.

DR. AIKEN: Dr. Brown, what do you think of the idea of using plaster molds directly to a burned area.

DR. BROWN: I would not like to say what I really think of them because, according to the Golden Rule, I would not want one on myself if I had a burn. Somebody might use them and get away with it but it certainly is not a universally accepted method. Advocates of this method have gone over this proposal for a good while of putting plaster paris directly on burns. But they have never mentioned whether they included full thick-



ness skin losses or not. So at least for the present, I do not think that one ought to count on plaster fixation directly on the burn. For the maintenance of pressure and maintenance of fixation, it is all right to put plaster over dressing to hold it but, again, I have seen them left on too long, with poor results. I do not use it.

DR. AIKEN: Dr. Brown, while your motor is running, do split thickness grafts generally take better than others? What is the present status of split grafts?

DR. BROWN: Split grafts probably take better than any other type of graft. They do not necessarily give the best result. Technically, for some reason or other Negroes grow grafts better than anybody else. Pinch graft should never be used on exposed surfaces, first, because they are too ugly looking when one gets them on, and a corollary is that they should never be taken from an exposed surface as the donor sites are unsightly. One more thing about pinch grafts. They are definitely advantageous in such things as bed sores if patients cannot stand anything else. One criterion about pinch grafts is that if one does use them one ought to be as careful with them as with any other kind of graft because thousands of pinch grafts are lost unnecessarily. It is not so much that they will not give a decent surface and that they look so awful but they cannot be utilized in patients requiring wide dissection where there is a contracted flexion deformity. Skin grafts are sewed usually on irregular surfaces. On flat surfaces such as the lower extremity or the skull or wherever one can put on split grafts and can smooth them out and have them stay put, they can be what is called "snubbed on." This was included in our book many years ago. The graft is put on, smoothed out and is "snubbed on" following right along with a roll of bandage. I still think that a dressing is the thing to put on a skin graft.

DR. AIKEN: Dr. Kulowski, what place do you think long intermedullary nails have in treatment of fractures? I believe that a similar question has been answered.

DR. KULOWSKI: I do not think I have anything to add to what has already been said about it. There have been several good articles, one by Sayre a year or two ago in *The Journal of Bone and Joint Surgery*. I know him personally and he is quite enthusiastic about intermedullary nailing. Perhaps the future will show a definite place for the intermedullary nail. I personally have not used it yet because I have not had a case that I thought was suitable; namely some case of a femur or tibia or even a humerus or forearm in which I could not use one of the other proved methods of treatment known.

DR. AIKEN: Dr. Kulowski, discuss treatment of fractures of the coccyx.

DR. KULOWSKI: It seems that most of these fractures occur in women, from a fall on the buttocks. Occasionally it follows a difficult delivery. Three points need to be mentioned: The first is pain.

If this is due to a displacement it can readily be reduced gently per rectum under local or general anesthesia. Retention may be accomplished by strapping the buttocks, the use of a rubber ring, sedation and maintenance of a soft stool.

Pain without displacement may be controlled by local infiltration with 1 per cent procaine hydrochloride which occasionally needs to be repeated along with other factors mentioned.

Finally, there is to be considered the not uncommon subsequent development of coccygodynia. This is often strongly underlined by psychogenic factors which can be in large part prevented by assuring the patient at the time of injury of its relevant trivial character. Occasionally procaine injections may be helpful. In the rare irreversible type which presents definite subsequent local abnormal motility and pain, without any other cause of low back pain, it may be necessary to remove the coccyx. This should not be done except as a last resort when all other conservative and suggestive therapy has failed. One should not remove the acutely injured coccyx.

DR. AIKEN: What is your treatment of ankle sprain with severe hematoma?

DR. KULOWSKI: The trouble with this type of injury is that there usually exists more than a simple sprain. The presence of a severe hematoma should make one suspect graver injuries such as chip fractures, periosteal tears, ligamentous tears, self-reduced or spontaneously reduced subluxation and even fine linear fractures without displacement. The latter is observed most commonly in the cuboid bone. Not infrequently, there is some disruption at the tibial-fibular junction. This is often difficult to demonstrate on ordinary x-ray plates. For these reasons it is essential to treat these injuries more adequately. In order to play safe, when the patient is first seen, a plaster boot should be applied from the toes to the knee with the foot and ankle in the neutral position. In from seven to ten days the plaster is removed and a further careful x-ray check-up is made in order to rule out again the possibility of injuries as mentioned previously. Negative findings now permit further treatment along more conservative lines of physiotherapy and more simple types of supportive measures. In cases which do not respond favorably, one may find three or more weeks after injury evidences of paraosteal calcification such as sometimes occurs about the medical epicondyle of the lower femur following similar injuries to the knee. Not infrequently one even observes a rather stubborn form of Sudeck's atrophy following these so-called ankle sprains. This requires mechanotherapy and physiotherapy along with modern types of treatment designed to increase peripheral circulation and enhance recalcification.

DR. AIKEN: Dr. Rowlette, in an elderly patient, a female 80 years of age, with chronic myocarditis and hypertension, who suddenly has an acute thrombus in the femoral artery, resulting in gan-

grene of the foot, leg and ascending the thigh, how would you treat this patient?

DR. ROWLETTE: It is a bad spot but I would say the first thing I would do would be to give her dicumerol, not less than 100 mg., preferably 200 or 300 miligrams, to take care of any other thrombi which might form. True dicumerol takes about forty-eight hours to become effective. If one had quite a bit of nerve he might heparinize that individual if there was a chance and I presume the patient was fibrillating, that is probably the source of the thrombus. I have not used heparin extensively. I have used the intravenous route when I did, giving 30 mg. of the heparin immediately intravenously and two hours later checking the clotting time, using the capillary tube method. We

try to achieve a clotting time by that method of 15 minutes, and repeat heparin every three to four hours as indicated. In both heparinizing and decumeralizing a patient one will find an extreme variation in individuals and the dosage must be adjusted accordingly. In this particular individual I would use dicumerol if the leg was already gangrenous and ascending as was stated. I think I would ice down the extremity preliminary to amputation later. I think in this type of individual that already is in a precarious state, amputation by the refrigeration method is preferable, and certainly if there is any sign of toxemia. It will hold the toxemia in check until such time as amputation is performed. Presumably this thrombus is somewhere in the upper femoral so that thigh amputation will probably be able to be done.

## SYMPOSIUM ON TRAUMA

W. A. BLOOM, M.D., *Fayette*, Moderator

Panel: DAVID W. ROBINSON, M.D., *Kansas City*

ROBERT D. DUNCAN, M.D., *Springfield*

FRED A. JOSTES, M.D., *St. Louis*

EDMUND A. SMOLIK, M.D., *St. Louis*

W. A. BLOOM, M.D., *FAYETTE*: Dr. Duncan, what is your opinion in the use of well leg Roger Anderson splint, or some such appliance, in the treatment of extracapsular fractures of the femur?

ROBERT D. DUNCAN, M.D., *Springfield*: That question, of course, is mainly an orthopedic problem and we really should let Dr. Jostes answer that. I have not used a well leg traction for a good many years. I had the opportunity of working on the West Coast with Dr. Roger Anderson for a short time and saw him demonstrate this well leg traction. In his hands, he can use it wonderfully well. He showed us how he could manipulate these fragments under the fluroscope and get an excellent reduction, correct absorption and a satisfactory final result. I usually turn those over to the orthopedic men. As I said I have had no recent personal experience with them.

DR. BLOOM: Thank you Dr. Duncan. I am going to ask Dr. Jostes to express his views on this question.

FRED A. JOSTES, M.D., *St. Louis*: My own belief is that well leg traction serves its best purpose in the treatment of intertrochanteric fractures. I am not prone to use this in shaft fractures of the femur. There are men who are using well leg traction in the treatment of shaft fractures and apparently are getting good results. I think for general use, I would not use it.

DR. BLOOM: Dr. Jostes, what treatment is advisable for painful coccyx, for injury years before, not necessarily fracture?

DR. JOSTES: I think that painful coccyx as a rule is the result of some trauma and it probably is the

result of the poor treatment of such trauma. To begin with, in the acute phase repeated trauma from sitting in the wrong way will lend itself to continued pain. Whether one has a fracture of the coccyx or whether it is purely one of strain produced when one jams the joint in sitting down hard, I feel that the burden of proof is on the doctor who fails to tell the patient what to do and how to do it. And the only means one has of eliminating pain is to teach the patient to sit properly. Modern modes of sitting on overstuffed furniture, on theater chairs and the like, are not normal methods of sitting. If one would teach the patient to sit on the two pads that God gave him to sit on instead of sitting on his sacrum and his coccyx he will get rid of his pain. A painful coccyx becomes part of a vicious circle. If the individual sits on a painful coccyx often enough he becomes nervous and when he becomes nervous he does what the Germans speak of as "rutcking" and he moves around on his coccyx and continues to traumatize and continues to produce pain and therefore prolongs the agony. To teach that patient to sit properly will cure from 95 to 99 per cent of the painful coccyx patients. Few painful coccyx should be removed surgically.

DR. BLOOM: Dr. Robinson, will you please discuss the coverage problem of the injured hand?

DAVID W. ROBINSON, M.D., *Kansas City*: This is an important problem which is neglected in the teaching of surgery in the medical schools. In the first place one should attempt to preserve function whenever possible, preserving strength and preserving motion of the various members of the hand



and paying particular attention to coverage of tendons, nerves, bones and joints. When the hand loses the surface over one of these structures, in order to facilitate immediate or late repair, something more than a skin graft is needed. The handiest type of flap coverage which gives good skin and fascia for the immediate coverage and which can be used for a future operation that may be necessary from a reconstructive standpoint is the flap from the abdomen, a direct simple flap covering that part of the hand under the raised part of the abdomen. In order to operate secondarily on tendons, this is fundamental because operation through a simple skin graft is quite impossible for a good result later. Similarly, when the end of a finger has been pulled off but the bony structure is intact and the patient can wiggle the end of the finger without its fleshy coverage, one can add length or save length to the finger by the same mechanism. The hand is an important structure; it is perhaps what makes the difference in some ways between a man and a monkey.

DR. BLOOM: Dr. Smolik, I would like to ask the indications for elevation of a depressed fracture of the skull without immediate symptoms of a brain injury?

EDMUND A. SMOLIK, M.D., St. Louis: This is a problem which has undergone some change in the way of thinking and the concept in handling. In general, a simple depressed fracture, when there is loss of motor function, should be elevated. The simple depressed fracture without neurologic sign presents another problem. Various schools of surgery have tackled this problem in various ways since the time of Pare. Up to a short time ago, we subscribed to the school that felt that elevation of a simple depressed fracture was mandatory even in the absence of neurologic signs in order to obviate potential sequelae, particularly with reference to traumatic epilepsy. However, we believe that there has been brought to light recently substantial evidence to make us change our attitude along these lines. This is predicated on a rather crucial series of experiments which were done at the laboratory of Dr. Nafziger by Dr. Glaser about 1925, in which depressed fractures were produced in rabbits by calibrated weights. These animals were sacrificed at various stages of time and it was shown, and rather conclusively, that whatever injury that occurred to the brain occurred at the time of the injury. There was one difference and that occurred in those animals which sustained a depressed fracture with spiculation and tear of the dura. In most instances, but of course not always, this could be determined by careful examination of the roentgenogram. From these experiments one could deduce that elevation of the non-spiculated fractures would have no beneficial effect on subsequent cortical histology. Lately, within the last year or so, Dr. Glaser has collected more than a thousand cases, and followed them carefully in the light of these experiments. He has substantiated the experimental evidence that assuming that a depressed fracture is without neu-

rologic signs and is non-spiculated, elevation will have no effect upon the eventual outcome in terms of sequelae such as epilepsy. Our feeling is that most depressed fractures without neurologic signs, which show no spiculation, are generally better let alone. In a particular case other contingent factors such as cosmetic and psychologic, may influence the decision.

DR. BLOOM: Dr. Duncan, I would like to ask you, in extensive third degree burns, how do you handle the secondary sepsis which occurs about the fifth day?

ROBERT D. DUNCAN, M.D., Springfield: The secondary sepsis that occurs is quite a problem. Ordinarily antibiotics are used as routine therapy in the treatment of burns. I think that the large amount of the sepsis and a large amount of absorption and the temperature and rash that occurs about the fifth day is perhaps not alone due to sepsis but due to the protein materials that are absorbed by the body. It is always a question in extensive third degree burn of combatting this absorption and this sepsis and maintaining the fluid balance in order to allow the body to throw off these toxic products. The antibiotics alone do not seem to govern or control this secondary sepsis. There is always a question of how much should be done, whether one should leave the dressings in place, whether saline baths should be used or whether one should attempt excision and skin grafting. These patients are usually pretty sick about the fifth day if they have had extensive burns. About the fifth day their blood count goes down, their red cells are down and they need transfusion, they need continuation of the usual measures that are carried on with the antibiotics, plasma and so forth, and the use of adrenal cortical extract is of some value about this time. I do not know the entire answer to this question but I think that the maintenance of the fluid balance, maintenance of the red blood count together with heavy antibiotic therapy and, perhaps, the use of saline baths and soaks will accomplish all that can be accomplished.

DR. BLOOM: Thank you Dr. Duncan. Dr. Jostes, what is the suggested care of fracture of the epiphyseal line of the tibia in a child?

DR. JOSTES: Whenever I see an x-ray showing a fracture through an epiphysis in the tibia I not only think in terms of how shall I put it back but the first thing I think of is how much damage has been done. How much damage has been done to the future growth of that bone? There are two ways of creating further damage. One of them is by operating on the child to replace the fragments; the other one is by being unduly rough in replacing the fragments in closed reduction. It is my belief that if within reason one can replace the tibia to approximately its normal position by reduction under complete anesthesia there is a better chance of getting no interference with growth than if you find it necessary and it is not often that it is necessary to do open reduction to replace such fractured parts.

Naturally, at a time when such an accident happens one does not wish to put a further burden on the parents but I never fail on the day following to tell the parents that even though it was possible to replace this fractured part in normal position that the complete aftermath might not be seen for a year or two. If one fails to tell a parent that, no matter how well one has replaced the fragments, the physician is the one who will be blamed for a discrepancy in growth at a later day.

DR. BLOOM: Dr. Robinson, what is the opportune time for replacement in multiple fracture of the face?

DR. ROBINSON: The opportune time always, as with most fractures, is the sooner the better. There has been, however, a controversy over this opportune time in that some men felt that fractures of the face being mostly soft bones could be put aside for the time being. However, of late, it has been the general consensus that even though there were some associated intracranial damage, whenever the neurosurgeon in charge felt that the patient could withstand such a procedure and the sooner the better, the fragments should be replaced. If one waits as long as ten days, the soft bones already are in a process of beginning union and if one waits much longer he cannot effect an adequate reduction. That would mean that the reduction at a later time would be recreating the fracture which would be a considerably more difficult procedure. With fractures of the mandible which are the commonest fractures about the face, with the exception of the nose, one can wait a day or two, it makes little difference. As with most fractures of the mandible a simple type of reduction is all that is necessary, that is, getting the teeth in proper occlusion and fixing the jaws together with this proper occlusion so that the fracture can unite properly. Remember the emergency principles of treatment of severe facial wounds: (1) the airway must be adequate (and herein one uninitiated may get in trouble); (2) hemorrhage has to be stopped by tying an artery proximal to the injury; (3) shock has to be cared for, and (4) the patient must have some type of fixation of his fracture before he is transferred for his further care.

DR. BLOOM: Dr. Smolik, what about head operation, cranial, for relief of epilepsy in cases in which epilepsy was not present before head injury, yet no apparent bony pressure on the brain?

DR. SMOLIK: This field of surgery is certainly indicated but requires a rather extensive and thorough evaluation of the patient, requiring considerable degree of specialized technics, particularly with reference to the use of electroencephalography, the use of multiple leads and accurate interpretation of the epileptogenic focus. Surgery, when instituted also requires a rather elaborate cooperative group. Surgery is best undertaken under local anesthesia and again with the use of direct cortical leads. There has been some question in the light of rather recent observations that better results may be obtained not necessarily by the excision of

the cicatrix but of adjacent and what appears to be normal cortex. It apparently is in this area that the physiochemical changes have taken place. The results, of course, are not at all 100 per cent. The best one can hope for is an amelioration of the intensity, the frequency and perhaps even the character and quality of the convulsive disorder.

DR. BLOOM: Dr. Duncan, please discuss traumatic hemothorax and your idea concerning repeated aspirations.

DR. DUNCAN: Hemothorax is just like hemorrhage anywhere else in a body cavity. I believe that originally it is best left alone, at least for a period of time. There is considerable question as to whether or not the hemothorax should be aspirated. If the hemothorax is large enough to cause respiratory embarrassment, it should be aspirated. Then in extensive hemothorax the mediastinal shift is the thing that is dangerous and by doing the aspiration of course one can correct that. Another feature that arises in regard to hemothorax is the after effect of the excessive amount of blood over the surface of the lung. If the hemorrhage is not too large in the beginning, it is probably better to treat the patient conservatively and watch him for signs of respiratory embarrassment. He should be checked and given a supportive blood transfusion to combat the loss of blood that occurs in the chest as this can be quite extensive at times, 2,000 or 3,000 cc. being lost on occasion, leading to a fatal result from that alone. With any hemothorax the blood should be aspirated, however, as soon as bleeding has stopped. If one allows this hemothorax, this blood, to remain in the chest, it will cover the surface of the lung and in a good many instances it will become organized and will cause a partial collapse of the lung and, if left for a sufficient length of time, the collapse will be covered with fibrous tissue and more or less permanent. That extensive hemothorax should be aspirated early; if it is not aspirated early, the use of aspiration plus blow bottles to expand the lung can be done. If the lung cannot be expanded, I believe that an open thoracotomy is indicated and a modified type of decortication procedure carried out. A thoracotomy is not particularly dangerous and with the judicious use of antibiotics both intramuscularly and in the chest during or following the surgery the danger of infection is not great. In addition to unroofing the constricted and collapsed lung the presence of any subsequent emphysema of the opposite lung, any calcification of the hematoma and any limitation or aeration of the lung, can be prevented.

DR. BLOOM: Dr. Jostes, please discuss the value of manipulative therapy in low back pain and sciatica which may often be observed following apparently trivial injury.

DR. JOSTES: There are many controversial questions to be answered when I answer that question. Sciatica can be produced by trivial injury. Since 1931 I have done a great deal of manipulative work with low back and sciatic irritation. Certainly, of



course, I think that judicious and gentle manipulative therapy without anesthesia has a definite place. I can hardly answer that question without going into the causes of sciatic irritation. That would take me into the field of a question of a ruptured nucleus pulposus. Suffice it to say that carefully done and judiciously done mild manipulation of an individual who has had a back injury and a sciatic irritation may produce rapid results. This is the type of patient because of dramatic results that has been referred to as the miracle of the cult.

**DR. BLOOM:** Dr. Robinson, is applying full thickness graft to the end of amputated fingers a good practice?

**DR. ROBINSON:** Yes, it is a good practice, providing the bone is not exposed. Often one sees a patient, let us say a housewife, who has sliced off the end of the pulp of the finger. The simplest and easiest thing to do is to take a full thickness skin graft. One can take it in the same field, the forearm, if he likes, under local anesthesia, block the base of the finger with local anesthesia and apply the skin graft directly, sewing it on with a little pressure. Dress it for the first time in six or seven days. It usually will take 100 per cent if there is no bleeding under the graft or there is not excessive trauma to the pulp tissue. The patient is ready to go about her duty in another few days. In contrast to that I have seen several times, as have you, amputations of the distal part of the digit for such an injury which in my opinion is never indicated. It is never indicated to lose any part of the hand if one can avoid it.

**DR. BLOOM:** Dr. Smolik, how effective is lumbar sympathectomy in the treatment of congenital megacolon? Is the transabdominal route preferred?

**DR. SMOLIK:** Lumbar sympathectomy is effective in the treatment of congenital megacolon. As to the technic and method of approach, that, of course, depends upon the situation in hand; the age of the patient and several other factors. We ourselves have preferred to complete the management with the consultation of a skillful general surgeon.

**DR. BLOOM:** Dr. Duncan, how would you treat a person with a rigid abdomen following an automobile accident when there is no external evidence of abdominal injury?

**DR. DUNCAN:** That about covers the field of trauma of the abdomen. Often one sees a patient who has been in an automobile accident or other form of accident who is brought to the hospital with structural injuries and in addition to the structural injuries has some abdominal pathologic condition, as demonstrated by rigidity and tenderness. Rigidity can be caused by conditions other than those in the abdomen itself. Often with a fracture of the back one sees a rigid abdomen. Sometimes it can be almost boardlike. With injuries to the chest one finds a rigid abdomen. And, of course, with any injury within the abdomen, there is a certain amount of rigidity. I think the first thing to do when one finds this condition in a patient who has been in an

accident is to try to evaluate the degree of pain and rigidity. Of course, if the patient is unconscious, that is another thing. If the patient is conscious one should try to evaluate the amount of pain and the amount of rigidity present. Usually with a perforated viscus or an injury to the pancreatic tissue there is a rigid abdomen which is very tender. This type of tenderness is usually deep rather than superficial. The type of rigidity and tenderness that occurs with a back injury, or a spinal compression fracture or radiculitis is usually superficial. The next thing is to watch the patient. I believe that a period of observation and conservative therapy is indicated with a case like this. With a ruptured ulcer patient there is a period of about eight hours from the time of rupture in which to perform the surgery. If necessary a period of observation for this period of time can be carried out safely. I think that following an automobile accident or any other injury it is the best policy to try to evaluate the patient in general and adopt a conservative attitude. If the patient is sick at his stomach, the type of vomitus, whether it has blood in it or not, gives some hint. Sometimes a rectal examination, the presence of blood on the examining finger, will help. Of course, the laboratory will help a great deal by determining whether or not there is any hemorrhage, what the hemoglobin percentage is and the leukocyte count. It is probably a good idea in anyone who has any abdominal injury to get an immediate blood count and a cross matching in order to have some blood on hand for that patient. After a period of watching, these patients often will improve. It will then be obvious that some other condition has caused the rigidity in the abdomen, such as a contusion of the bowel mesentery or spinal injury or some other cause for the condition will become evident. The presence of blood in the abdomen does not usually cause a great deal of rigidity at first.

**DR. BLOOM:** Dr. Jostes, what is the best treatment for nonunion of the neck of the femur, one year old, with destruction of most of the neck?

**DR. JOSTES:** I think that again would depend upon the school to which one adhered. Many of the reconstruction operations are radical procedures to be performed upon people of any age beyond 50 or 60. Probably the simplest method of handling all of them would be the osteotomy in which one changes the entire position of weight bearing without hardware. Probably the second best method is one in which one does an osteotomy and uses hardware to fix the necessary free parts. More recently there have been efforts to replace the head of the femur by an artificial head of metal, or acrylic acid. That is still in the experimental stage. The old and tried method of a combined nail, even at that stage, plus a bone graft above the nail has proven successful in many hands. Again, this treatment is one of preservation of circulation. Some operations destroy circulation instead of augmenting it. But it is my belief that the simplest procedure of displacement

osteotomy in most hands would be the judicious choice.

DR. BLOOM: Dr. Robinson, what is the most acceptable initial treatment of extensive second and third degree burns of the body, face and perineum?

DR. ROBINSON: We do consider this as a part of our work in plastic surgery, in fact we treat a good many burns initially. The consideration of the treatment of the burn first has to be from the general standpoint of the patient as well as the local treatment. I presume the local treatment is what is being chiefly asked about but just a word about the general consideration of the burn patient. These patients are acute surgical emergencies. They have to be treated first of all for the replacement of that part which is lost, namely, the circulating fluid and blood volume which has run off into their tissues or out on the surface. Therefore, therapy is first directed toward restoring the circulating fluid volume and it should be replaced mostly by blood plasma or whole blood or a mixture of the two. We use about two parts of plasma to one part of blood, giving approximately 100 cc. of plasma for per cent of the burned body surface within the first twenty-four hour period and giving the majority of this, at least one half, within the first eight hour period. A good indication of how the patient is progressing is whether or not he is putting out adequate urine. If he is voiding about 100 to 300 cc. an hour he is doing all right. If he is voiding less than 50 cc. an hour either he is not receiving enough fluid therapy or his kidneys have shut down and one has to be doubly cautious about the amount of fluids and the manner in which they are given.

Not dissociated from this general treatment but as a part of it, the local treatment should be considered. First of all, let's say that one is going to do what will do the patient the least harm. One is going to put on his burns what will be the most kind for healing. One should avoid infection and contamination in every way possible. Just in a brief outline, as soon as the patient can tolerate it a clean up is done with mask, gown and gloves on and a sterile sheet under the patient. Have an attendant cut away the clothes, then proceed with a cleansing débridement using bland soap and copious quantities of sterile water, removing the large sheets of skin, and breaking the large vesicles but leaving the smaller ones. Do this rapidly. This is not a scrubbing up with brush process. This is something that is done with bland sponges or cotton. Change gloves and start in again to put on the first definitive type of dressing. It does not make much difference which type of substance one uses in the dressing providing it does no harm. I prefer either a fairly dry vaseline gauze with a fine mesh base, about a 44 gage bandage, or one of the greasy ointments with vaseline as a base in which boric acid is incorporated or some other bland substance. One should not use too much boric acid on a large burn surface because it has been demonstrated to produce damage in some patients. The dressing is

then put on in a sterile manner, bound on in a large copious pressure dressing utilizing sterile mechanics waste, but that is just a medium, any bulky substance will do. Put the extremities in a position of function and leave the patient with his dressing intact for a long period of time. There is always a tendency after about a week to take the dressing off because of the odor. The only indication for removing the dressing is when one is sure that sepsis is present and open drainage is necessary. Leave dressing on primarily about two weeks, sometimes twelve days. When the first dressing is removed, a second degree burn will be totally healed and in a third degree burn it will be obvious what part of the slough will have to be removed and replaced with a skin graft in the shortest time possible.

DR. BLOOM: Dr. Smolik, and Dr. Jostes, will you discuss the treatment of fractures of the intervertebral disc in the third and fourth lumbar vertebra?

DR. SMOLIK: It would have been nice to have had the first panel cover that question. It is a problem indeed, this whole question of the intervertebral disc. It has so many facets, both from the viewpoint of the patient concerned, his occupation, his relation to society, the doctor that first sees him and the surgery that is done makes up an intricate composite. The patient who has a classical neurologic picture from the viewpoint of symptoms and signs following a definite sequence of events and involving a definite nerve root compression in which there is demonstrated a disc removed reasonably skillfully, the chances of having a grateful patient can be better than 50 per cent. But there are other factors that enter the picture like thieves in the night and they upset the appercart. The first question, of course, is a matter of diagnosis. One tries to have, at least in his own mind, certain definite categorical classifications as to the trend of symptoms and signs. Assuming that one suspects a disc being present either extruded in terms of a "fracture" or "rupture" or "herniation," one may belong to the school that will attack the problem immediately with surgery or one may subscribe to the school that believes that further diagnostic technic should be employed. I am assuming that simple x-ray of the spine has been taken, which may or may not show some narrowing of the intervertebral space. A spinal puncture with Queckenstedt test should be done in order to determine the possibility of a block. The total protein of the spinal fluid should be determined and panopaque myelography carried out. This should be done by the surgeon handling the case. He should be present together with the radiologist. It has been distressing in many instances to see myelography carried out by people who do not know the least thing about the patient, and care less, who inject the material, snap a couple of pictures and on that basis an operation is carried out. I do not believe that that is the best surgical maneuver. Now, if there is a defect demonstrated, there is a disc one should tackle. If a disc is not demonstrated, the question



comes up whether exploration should be executed or not. In a certain percentage of cases a myelography does not of itself exclude the presence of a disc. With reference to the removal of the disc, I believe that a simple procedure of removing little lamina, going through the ligament and displacing the nerve root should be employed. The question of fusion may then enter into the problem. It has been my feeling that fusion should be carried out at a subsequent time. In the management of the whole case, generally speaking, we have subscribed to the philosophy of conservatism. We operate on relatively few discs as such. We believe that they should be given a course of conservative care and that they should be seen in cooperation with the orthopedic surgeon. I am sure that Dr. Jostes will have a few comments on this question.

**DR. JOSTES:** The popularity of the disc operation today I think has almost reached the level of the popularity of appendectomy when I was a student. I think it unfortunate that so many disc operations are being done. To begin with, I feel that, as Dr. Smolik has said, many people are attempting to make a diagnosis of a ruptured nucleus pulposus and using procedures which they should not use. I do not know whether one should blame medical schools for this but to my amazement when I came back from the war, I found students who would write an admission note on a patient of mine in a hospital as follows: "Finding: so and so. Sounds like a disc. Should have panopaque immediately." We had sent the patient in the hospital for conservative measures. I agree literally with everything that Dr. Smolik has said. I have written some notes here and I will read them.

Negative myelography means nothing really. Way back in 1935 I proved on the operating table while a neurosurgeon was doing the job for me that I could make a disc appear and make it disappear. That is not true of all of them, of course. But given the positive findings, a patient who continues to be miserable, who continues to have repeated attacks of tremendous disability, I believe is entitled to myelography and careful exploration.

There are poor results and we see many of them. They are coming in now having had one, two and three operations, and that makes it hard for us and the neurosurgeon. To diagnose a case that has been played with three or four times is most difficult.

The aftermath: One sometimes still feels that he is still looking for a perfect result, looking for the patient who has had a perfect result who has no aftermath. There are many who do have positive relief from their excruciating pain but who have aftermaths which sometimes are pretty bad. Now, the original thing that has caused a rupture of the nucleus itself probably was some fairly severe process and I consider sitting down hard as such. But why is it that the patient says to me, "I did not do a thing, I leaned over to pick up a piece of paper from the floor and like a streak of lightning I had a sharp pain in my back and the next day I waked

up and I had pain down my leg." She did not get it just that day. She had a disc long ago and as men who operate on these patients will tell you, the disc may lie in any one position where it has been extruded but it only produces symptoms when through some slight act it is pushed into a certain position and then it produces nerve pressure. That is why sometimes quite dramatically one can knock out a severe pain because this little bit of material shifts its position.

The question of fusion later. There are so many cases that have had disc operations and fusion operations and later have had to have the fusion broken down again, and then it is like going through concrete, exploring for discs. I agree that if a person has a positive disc and it has been removed, unless there is a gross thing such as a spondylolisthesis, fusion should be deferred even though the patient is required to have two major surgical procedures. And a combination of a disc operation and a fusion operation is not a good one.

A word about the conservative method of treatment. For some reason or other, one sees many, many backs. I am willing to say that, and I will not quote figures for I do not know them really, but in a large series, one finds that only 2 per cent need operation or it may go up to 5 per cent. I have seen many patients who have positive findings such as complete absence of the ankle jerk, but with the proper conservative methods the disc has been shaken down and the reflexes come back. But one must not lose sight of the fact that he must never allow a ruptured nucleus pulposus to go to such a point that the individual suffers a true paralysis as I have seen. I have seen a doctor's wife who has had a disc for many, many years lose almost complete use of one extremity. One should not allow that to happen under any circumstances, if one can avoid it. I do not think that I should take time to go into all of the conservative routines. Suffice it to say that I feel that such patients should have every opportunity of letting the disc go back where it belongs. And how is that done? There is only one way and that is to have the patient's spine in flexion, flexion of the hips and knees produced in bed, with the knees drawn up, legs lying on a chair. The patient should do the exercise of riding a bicycle in the air at intervals. Proper support in the daytime and at night is important. I feel that with such measures one is able to give the majority of people relief.

**DR. BLOOM:** Thank you gentlemen for this excellent discussion. We have time for a few more questions. Dr. Duncan, how do you treat a crushing chest injury with paradoxical respiration?

**DR. DUNCAN:** The chest injury severe enough to have paradoxical respiration results from bilateral fractures of the ribs with the rib cage on each side being involved. This is one instance, I think, in traumatic surgery where one does not treat shock first. One treats shock eventually, but before one can treat the shock first he has to have a live patient. In

order to have a live patient one must give that patient oxygen. The first thing that happens in a paradoxical respiration is that the patient does not have the proper exchange of air, his vital air capacity being cut way down, and with little tidal exchange of air in the chest; so the first thing that has to be done is see that the patient is given oxygen. He usually has to be given pure oxygen. About the only method I know of in which one can give a patient pure oxygen is with the use of one of the nasal oxygen masks, such as the Boothby-Bulian-Lovelace masks or one of the other varieties. With the use of one of the masks, the administration of pure oxygen will allow a normal oxygenation of the lung, even with a small respiratory exchange. The second phase of the treatment involves general treatment, as in the case of an injury. The patient is first treated for shock. One has to be a little careful about the forcing of fluids and plasma because, quite often, along with the injury to the chest, there is a laceration of the lung, subcutaneous and mediastinal emphysema and perhaps pressure on the great vessels, with impairment of the normal heart action. Blood and plasma—blood is probably better than plasma in these cases—are administered to correct any anemia that may have been present originally or that occurs as a result of other injury that the patient suffered. Following the oxygen and shock therapy, local treatment and immobilization of the chest must be carried out by some means. If the side of the chest is the site of injury and is causing the paradoxical respiration with the falling in and out of the tissue with respiration, about all that can be done is to strap the patient with elastoplast or some similar dressing. If it is the sternum that is in and out, elastoplast strapping will not help a great deal. In several instances of this sort I have used an ordinary wood screw. The screw is cleansed and sterilized and inserted into the sternum. The patient is then placed in a fracture bed or bed with a fracture frame and overhanging pulley. A rope is attached to the wood screw, bringing it up over the pulley and the fracture frame and a weight is placed on the rope. The amount of weight that should hang on the rope varies from six to ten pounds, as a rule, depending upon what is necessary to keep the sternum in a more or less immobile position. By this means one sometimes can save these patients. The mortality rate is quite high in such a case because of the original nature of the injury and the severity of the shock. The main thing to be remembered is to give the patient oxygen therapy first and then carry out the routine treatment afterward.

DR. BLOOM: Dr. Jostes, what is the best treatment for fracture when the head of the femur goes through the acetabulum in a male 40 years of age?

DR. JOSTES: I do not know if the doctor is in the audience but the meeting of this Association was the occasion of such a trauma to one of our doctors in the district of St. Louis. The head of his femur went through the acetabulum and lay just above

his bladder. Naturally straight traction was put on his leg and lateral traction with a band that pulled out away from his trochanter. After the first thirty-six hours when his condition was better I did a careful rectal on him and I hit a flat table of bone. And with the combined traction of lateral and straight away I put pressure on the flat table. Today that doctor has literally a normal hip. I hope I outlive him because I want to see whether anything will happen to that head as it usually happens to a head of a femur when it has once been dislocated. Will he have a degeneration of the head? Ninety-nine per cent of them have trouble afterward. So far he is normal. I think that must have been fifteen years ago. I do not say that that is the way to treat them all. The best method, of course, is straight away traction and lateral traction from the trochanter.

DR. BLOOM: Dr. Robinson, I have one more question for you. Try to picture a patient with total excision of the nose skin and part of the face, areas of 1 to 3 centimeters in diameter.

DR. ROBINSON: I presume this question means an excision of the skin of the face over the nose and part of the face due to trauma. If there is satisfactory soft tissue underlying this traumatized area the best procedure that can be accomplished at the time is to place a thin split graft or medium cut split graft over the traumatized area. I had such a patient with almost an identical situation as this over in Europe when his jeep overturned and he skidded his nose off his face. I put a split graft directly over the traumatized area and got almost a 100 per cent take so that he could be sent back in a little more than a week's time for his total rhinoplasty which he would have to have made from his forehead or his arm at a later time. Now all one can do when a major portion of the face is injured or removed surgically is to get the best coverage possible at the time and depend upon reconstructive surgery at such elective time as one is sure there is no further osteomyelitis or further possible infection that might undo the reparative surgery.

DR. BLOOM: What are the indications, Dr. Smolik, for lobectomy?

DR. SMOLIK: I presume lobectomy has reference to excision of normal cortex for mental disease. That is my assumption. Another assumption might be lobectomy for infiltrating glioma of the brain. We have excised in toto the occipital, parietal and temporal lobes or great sections of the frontal, parietal and temporal lobes for large infiltrating gliomata but, of course, in no instance has there been survival for any appreciable length of time over and above that which is obtained by simple resection of as much of the tumor as is visible and backing out with a decompression. With reference to lobotomy for mental illness, we have used various types of operative maneuver. The indications are primarily those within the psychiatric realm. Essentially boiled down, we have tackled the miserable garbage of humanity that rests within the



state and city sanitarium that have been mentally ill for anywhere from ten or thirty years and that has gotten vitamins and hormones and laxatives, green medicine and yellow medicine, electro shock, insulin shock, metrazol shock and psychotherapy, psychoanalysis early, and have not been benefited. These are the types that we have undertaken for surgery. Approximately, one out of three patients is rehabilitated for society. That, of course, varies. Catatonics and hebephrenics do not do so well. Paranoids do well. We prefer the lobotomy operation. We prefer the lower quadrant section believ-

ing that there is less deficit. We have not undertaken resection of the frontal lobes. This has left a considerable amount of deficit in the hands of others. We have not done a so-called topectomy in which there is resection of definite areas of the cortex. We have carried out recently the so-called transorbital operation maneuver in which an ice pick affair is driven through the orbit, an ingenious Italian device, but I think the statistical result will not be in the order that has been obtained from the standard procedure. I do not know whether I have answered the question completely but I assume that that was what was meant.

## THE ISSUE OF COMPULSORY HEALTH INSURANCE

PAUL R. HAWLEY, M.D.

IT IS A GREAT mistake to consider compulsory health insurance as a separate, discrete issue in our present political situation. Compulsory health insurance is only a part of a large program designed to remake the United States into a socialist state.

Since the Socialist party has achieved no political success to speak of, after years of existence in this country—and the Communist party even less, although the success of the Communists in other directions is rather startling—our radical thinkers have turned to the popular political parties for the implementation of their program. This political maneuver offers them two great advantages. First, it removes the Socialist label from the program, which would be offensive to the majority of Americans; and, second, by dangling the left-wing vote before the greedy eyes of certain politicians of the established parties, it bribes them into incorporating the radical program in their platforms.

When viewed objectively and broadly, compulsory health insurance is no more vicious than a number of other "gimme" projects in the Socialist program, and it may even be less dangerous than some. Much of its importance arises from the fact that, because of its emotional appeal, it is being used as the spearhead of this drive toward the socialist state. Like Mr. Coolidge's preacher, who was "agin sin," our people are opposed to suffering and death. Their generous responses to appeals in behalf of the distressed peoples of the world are a measure of the softness of their hearts. They are peculiarly susceptible to propaganda devised to exaggerate deficiencies in our social structure. They are a credulous people, unwilling to impute false motives to schemers, whether the schemers be individuals or nations. Being pitifully uninformed in the field of health, they are in danger of being made suckers by a group who have political axes to grind.

It would be ridiculous to assert that there are

no problems in the field of the economics of medical care. For the past fifteen years, these problems have become increasingly pressing. The only area of controversy is that of the proper solution of these problems.

As has been the history of social problems for more than a century, all solutions proposed lie between the two extremes of wholly voluntary effort, on the one hand, and the most totalitarian form of socialism, on the other hand. This is the present status of the issue of compulsory health insurance in this country—unless one wishes to recognize that unfortunate, small group of reactionaries who have, thus far, refused to admit the existence of any problem.

I should like, at the outset, to make my own position clear. I have no personal stake in this battle. I am no longer in the practice of medicine and I shall never again return to it. I have no interest in maintaining an attractive economic status for practitioners of medicine except as this is an incentive for better practice and for the best type of young men to choose medicine as a career. My present position as the executive head of the great voluntary nonprofit plans is not at stake for the reason that I have no intention of continuing hard work even as long as it would take to get compulsory health insurance in operation if the bill were passed at this session of the Congress. So it cannot possibly make any difference to me personally whether we have compulsory health insurance or not.

### THREAT TO QUALITY OF MEDICAL CARE

However, I have long had an intense interest in improvement of the quality of medical care; and I think I may add, with complete modesty, that I have exerted some small influence toward the improvement of medical care for millions of Americans. I resent bitterly any proposal which will threaten even the present quality of medical care—not to speak of its future improvement. I have seen medicine practiced under free enter-

Except for the addition of a small amount of material which did not become available until later, this is a speech delivered to the Economic Club of Detroit on March 14, 1949.

prise, and I have seen it practiced by the Government. I consider myself a much more competent judge of medical care than Mr. Ewing and his left-wing cohorts.

In addition, I am an American citizen who was raised in the belief that the American pattern of individual freedom and of free enterprise in democracy is a heritage purchased by the blood of my ancestors who fought in the War of Independence, and that I am unworthy of that heritage if I fail to defend it against the invasion of socialistic and communistic ideologies. I was taught to believe that dignity is an admirable and a desirable quality of mankind; and that the maintenance of human dignity lies largely in a man's determination to provide for himself and his dependents instead of demanding charity either of his neighbor or his government.

Our people are now appalled by the disclosures of the infiltration of Communists into high places in our Government. This may throw some light upon the origin of some of the propaganda now being broadcast by the Federal Security Administration. In an address to a Communist Congress in Moscow in 1930, Comrade Manuisky, who was at the time Secretary of the Communist Internationale, said: "In the United States, for instance, the Communists must launch a powerful movement for social insurance. They must place themselves at the head of this movement and lead it to victory." Manuisky went on to explain that the principal objective of this world-wide drive for the socialization of medical care was "to strengthen the sections of the Comintern organization." Whether the Communists launched the movement in the United States, or whether they were able to enlist enough fellow travelers to do it for them, the movement was certainly launched. The issue today is whether or not the Communists, or their fellow travelers, or both, will lead it to victory. That compulsory health insurance is a most important part of the Communistic social insurance program was proclaimed by Lenin, himself, who called socialized medicine "the keystone of the Socialist state."

I am no Red-baiter. I do not see a Communist behind every telegraph pole—although I am beginning to look closer than I used to, since Communists are now being found in stranger places than that. I am merely presenting this documented evidence that compulsory health insurance is a beloved child of the Communist Party, and that a large part of its support comes from the Communists and their fellow travelers in this country. Of this, there can not be the slightest doubt; and it is very important that our people are made fully aware of the antecedents of this scheme.

Early in May of 1948, there met in Washington the National Health Assembly, called by the Federal Security Administrator ostensibly for the purpose of making an objective study of the adequacy of our national resources in the field of health care. The fact that, in the report of the Federal

Security Administrator to the President in a printed public document entitled "The Nation's Health," agreements reached in the National Health Assembly are so cleverly interlaced with the Marxian ideology of the Federal Security Administration that only an astute reader, alive to the situation, can distinguish between them, should not be permitted to blind us to the deficiencies in our health programs. It is a natural reaction to discredit the entire document when obvious propaganda, bearing only an obscure relation to truth, is encountered in it.

#### CALCULATED DISTORTION OF FACT

For this reason, "The Nation's Health" is an unfortunate document. Much of its contents is true, and should be pondered by every responsible citizen. On the other hand, many of the accepted facts presented have been, by implication or context, purposely distorted in a calculated effort to convey an erroneous impression to the casual reader; and there are some downright untruths in the document. As citizens, I think we have the right to inquire by what right such propaganda has been published by a Government department at the expense of the taxpayer.

As regards the health program now being advocated by the Honorable Oscar R. Ewing, Federal Security Administrator, every reasonable liberal thinker with a social conscience can accept in principle all its objectives except that of compulsory health insurance. I regard compulsory health insurance as an objective of Mr. Ewing and his radical supporters, rather than as a means to achieve an objective, because the proponents of compulsory health insurance have elected to wage their battle uncompromisingly upon this single issue. They will consider no plan for improvement of the health of the Nation which does not include this extreme leap into national socialism.

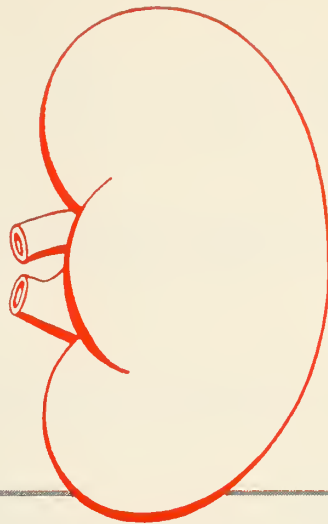
A large part of the propaganda now being so copiously put forth by people who presumably are supposed to carry out, rather than direct, the will of the people is aimed at the creation of an impression that there is an immediate and urgent necessity for a drastic change in the pattern of medical care in this country. Our traditional pattern of medical care, say the propagandists, has failed to bring to the great majority of our people the blessings to be had from the advances in medical knowledge. "Every year," says Mr. Ewing, "over 300,000 people die whom we have the knowledge and skills to save. This stark fact proves that the present system is inadequate."

Other than to assure you that Mr. Ewing's self-labeled "fact" is not a fact—start or otherwise—I shall not labor this point. Even if his so-called "fact" were a fact, it would not prove his contention, for the reason that there are millions—not merely hundreds of thousands—of people in this country who, through indifference or negligence, do not avail themselves of the medical care that is now easily within their reach. But this



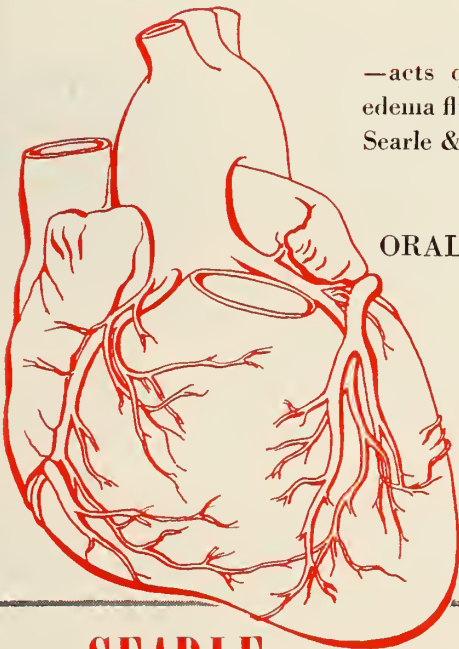
## To increase sodium excretion

"Thus it becomes apparent that Aminophyllin is a diuretic agent in that it can mobilize and excrete fluid and sodium even in the face of decreased intake."<sup>1</sup>



# SEARLE

# AMINOPHYLLIN\*



—acts quickly and efficiently to eliminate edema fluids in congestive heart failure. G. D. Searle & Co., Chicago 80, Illinois.

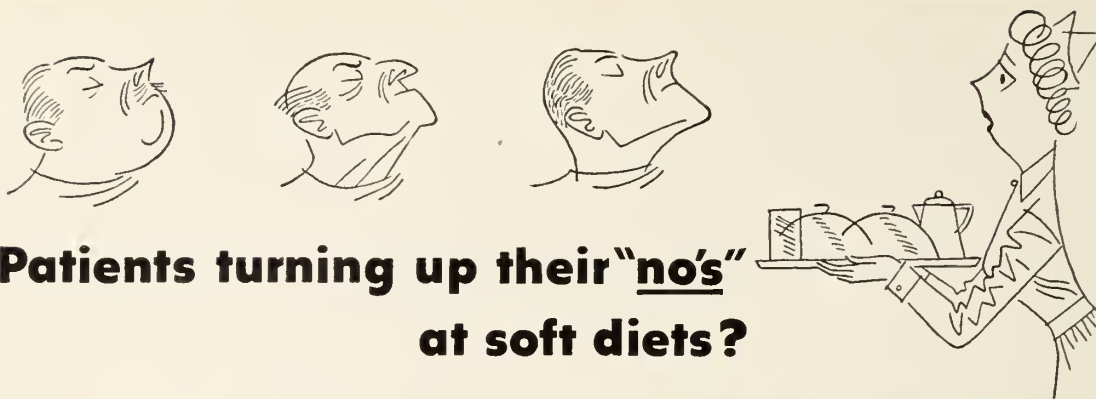
ORAL—PARENTERAL—RECTAL  
DOSAGE FORMS

*\*Searle Aminophyllin contains at least 80% of anhydrous theophylline.*

# SEARLE

RESEARCH IN THE SERVICE OF MEDICINE

1. Brown, W. E., and Bradbury, J. T.: The Effectiveness of Various Diuretic Agents in Causing Sodium Excretion in Pregnant Women, *Am. J. Obst. & Gynec.* 56:1 (July) 1948.



## Patients turning up their "no's" at soft diets?



## Try tasty, protein-rich Swift's Strained Meats!

### *A palatable, natural source of complete, high-quality proteins*

It's not surprising that soft-diet patients develop appetite-apathy. The things they have to eat!

To help overcome this anorexia many doctors now recommend Swift's Strained Meats. Delicious, *real* meat that patients on soft, smooth diets can eat and *enjoy*. Swift's Strained Meats provide an excellent base for high-protein, low-residue diet. Rich in iron, they're chemically and physically non-irritating. They make available *simultaneously* all essential amino

acids for optimum protein synthesis.

Swift's Strained Meats are tasty enough to tempt tired appetites. They supply goodly amounts of B vitamin to help stimulate patients' natural appetite for other foods. Swift's Strained Meats are 100% meat—a variety of six kinds: beef, lamb, pork, veal, liver, heart. Originally prepared for infant feeding, they're exceptionally fine in texture—may easily be used in tube feeding. Convenient—ready to heat and serve.



**6 varieties:**  
Beef, lamb, pork,  
veal, liver, heart



For patients who can take foods of less fine consistency—Swift's Diced Meats offer tender morsels of nutritious meats with tempting flavors patients appreciate.

The makers of Swift's Strained Meats invite you to send for your copy of "The Importance of Protein Foods in Health and Disease"—a physicians' handbook of protein feeding, written by a doctor. Send to:

## SWIFT & COMPANY

Chicago 9, Illinois



All nutritional statements made in this advertisement are accepted by the Council on Foods and Nutrition of the American Medical Association.



is not the only example of mendacious invention or covinous cant to be found in the arguments of the proponents of compulsory health insurance.

Let us rather inquire into the success or failure of the system of medical care that we now have.

In Rome, in the days of its Empire, the average length of human life was 24 years. When I was born, I had a life expectancy of 43 years. (I do not need to assure you that I have long since become a disappointment to the actuaries.) So, the medical progress of 2,000 years, prior to the day I was born, had added only 19 years to the average length of life. This is at the rate of only one additional year of life for every hundred years of medical advance.

My grandson, who was born last year, has a life expectancy of 65 years. Had he been a girl, the chances were even that she would live to be more than 70. During my own lifetime, 24 years have been added to the average length of life (both sexes considered). Six and one-half of these years have been added in the past 15 years. This is at the rate of one additional year of life added every 28 months, instead of every hundred years. So the rate of improvement is still accelerating and the limit of this increase in the average length of life is not yet in sight.

#### TAX-PAID PILLS NOT THE ANSWER

How much more progress can we reasonably expect? These pseudo-sociologists and socialists may assure you that, with compulsory health insurance, we shall all live to be 150 years of age; but the biologists, who know a few things about other factors influencing life-span, will tell you that there is more to this matter than pills dispensed wholesale at the expense of the taxpayer.

Granting always that there is still room for improvement, it seems to me that we are doing pretty well under our traditional form of medical care. I wonder how many of you would consider completely revolutionizing the pattern of your business if it were making such progress.

Except as a political experiment in a direction which, I hope, is still abhorrent to the majority of Americans, compulsory health insurance would not be such a great evil if it offered any hope of maintaining even the present quality of medical care. Mr. Ewing assures you that compulsory health insurance will not change the present pattern of medical care. Mr. Ewing is a distinguished lawyer who has retired from the law in favor of a political career.

I know nothing of the law, and even less of politics; but I know considerable about medical care. My grandfather was a physician; my father was a physician, I have been a physician for thirty-five years. It has fallen to my lot of having been responsible for the medical care of millions of Americans. I know what makes doctors tick and hospitals hum. I have never made a truer statement than this one that I am about to make: Compulsory health insurance will lower the quality

of medical care in this country to a disastrous degree.

#### GREAT BRITAIN'S EXPERIENCE

How do I know this? I have only to look at the results of compulsory health insurance in other countries. Let's take a look at Great Britain. Let's forget that it is costing Great Britain considerably more than twice the cost promised by the Socialist Government—let's forget, for the moment, its exorbitant cost and see only what it is giving.

Quite a number of people have spoken or written upon the operation of compulsory health insurance in Great Britain. The majority of these have been greatly biased either for or against. I propose to quote largely from an article by Mr. Lester Velie, one of the editors of *Collier's*, in the issue of March 5th of this year. Mr. Velie visited England and observed the system first-hand. While he tries hard to maintain a detached attitude, it is obvious, both from his writing and from the editorial in the same issue, that he leans toward the side of the proponents of compulsory health insurance. For this reason, I regard this evidence as peculiarly competent for my purposes.

There can be no doubt but that the many people who can obtain spectacles, false teeth, wigs and other accessories without paying for them are quite approving of the scheme. Of course, someone has to pay for these gifts, but this someone is the British taxpayer. Since many of the beneficiaries pay little or no tax, it is to be expected that they view such a windfall with approval. You would not expect them to criticize Santa Claus. Furthermore, as Mr. Velie points out, some of these beneficiaries are able to barter their medical prescriptions for cosmetics and other toilet preparations, which does not detract from the appeal of this new arrangement.

Let me now quote from Mr. Velie: "To enter London's great Westminster Hospital for a tonsillectomy, a school child must wait, on the average, fifteen months. A woman requiring urgent (and I emphasize 'urgent') gynecological surgery must wait seven weeks. So jammed are the free hospitals that many families, even those in modest circumstances, prefer to pay the high cost of child bearing . . . rather than take their chances in state institutions."

It might be argued that this trebled demand for medical service is proof that many people, in urgent need of such service, were unable to obtain it when they had to pay for it. This is not true. The experience in Canada as well as in Great Britain is that this great increase in the demand for medical service is largely in the field of inconsequential ailments which people usually disregard and which take care of themselves. Now that it appears to be a free ride, everyone climbs aboard the gravy train. This is human nature. It is human nature in the United States as well as in Great Britain. As an old doctor acquaintance of mine likes to remark, "Human nature is still prevalent."

So, we see how people in urgent need of medical care for serious conditions fare under such a system. Let's take a look into a British doctor's office through Mr. Velie's eyes. Within ten minutes after the doctor's waiting room was opened, there were some twenty patients waiting to see the doctor. "Against one wall," writes Mr. Velie, "was a queue of boys clutching prescription forms in one hand and comic books in another." Mr. Velie inquired about these boys. Here's the doctor's reply: "They are following my system for coping with the Health Plan rush. Here, watch this." Thereupon he opened the door to the waiting room, and a boy shot his hand into the doorway, waving a prescription form. The doctor filled out the form. Then another boy shot his arm in. "Father's tablets," he announced. This prescription was written. No patient seen—only prescriptions written. The absurdity, the terrible iniquity of such medical practice seems to have escaped Mr. Velie entirely. No self-respecting physician, with any conscience or the slightest feeling of responsibility for a patient, would stoop to such malpractice were he not driven to it by a stupid government!

After this wholesale writing of prescriptions, sight unseen, asked for by proxy, the doctor began to see the patients who had come in person. Mr. Velie records the consultation in only one such case, and I give it to you as he tells it. The patient was a former prisoner of war who had contracted beri-beri from the deficient prison diet. Apparently, in addition, he was suffering from an acute infection in one of his hands. The hand was badly swollen. Now I shall quote Mr. Velie directly: "He (the doctor) diagnosed the swelling as an infection, prescribed dressings, tonic, rest. 'You'll need several chits, won't you?' (the doctor asked) filling out government prescription form C-10 for free supplies and another slip for sickness benefits. 'How about my eyes, Doctor?' (asked the patient) . . . The doctor whipped off a green form. He worked unhurriedly, but the patient, forms and all, was disposed of in seven minutes."

#### PATIENT "DISPOSED OF" IN SEVEN MINUTES

This irony seems to have been unconscious on the part of Mr. Velie. "Disposed of" is the only term applicable to a patient who has been given such mockery in the name of medical care. I shall not bore you with a technical dissertation upon the seriousness of infections of the hand. But, to emphasize the inexcusable neglect in this instance, I want to say that infections of the hand are extremely dangerous affairs. Unless treated properly, they often leave a stiff, useless hand. Upon their hands depends the livelihood of the great majority of workingmen; and good doctors pay more attention to infections of the hand than they do to other conditions which may appear more serious to the layman. So, here is a patient with an infected and badly swollen hand, who is "disposed of" in seven minutes—which disposi-

tion including filling out three government forms. I am quite familiar with the type of forms used by the British Government. They are just as complex, and as stupid, as the ones used by our own Government. I tell you that no man alive can fill out three government forms in less than six minutes and fifty seconds—so you can see how much personal attention the patient got in the seven minutes he saw the doctor.

That, my friends, is the practice of medicine under the blessings of compulsory health insurance. But wait—there is some more. Mr. Velie accompanies this same doctor on his round of house visits. He says of the doctor, "In two hours he visits more than a dozen patients." This is an average of one patient in less than ten minutes. Mr. Velie says that the doctor "strides in and out of patients' homes on the double." I think that is a masterpiece of understatement. The only possible way a doctor can make more than twelve house visits in two hours is to meet himself going out the door when he is on the way in. This doctor, however, does realize that somewhere there is a limit to the number of patients he can see in a day. He confided to Mr. Velie, "I try not to think what would happen if there were a run of illness later in the winter." So do I try not to think of it—I even try not to think of what is happening to those patients in the slack season.

#### SYSTEM CREATES CHARLATANS

Now, you may think that this doctor acquaintance of Mr. Velie is an unconscionable quack whose sole motivation is money. It is not true. Mr. Velie describes him as a thin, unsparingly industrious and forthright man who is held in the highest regard in the town. A system of medicine, like compulsory health insurance has brought everywhere it has been tried, will make a charlatan out of the best of doctors; and there is no term other than charlatanism which describes the quality of medical care which Mr. Velie offers as a typical example. You can have this kind of medical care for yourselves and your families if you want it. As for me, I want no part of it—either on the giving or the receiving end.

One of the most ardent proponents of compulsory health insurance is Michael Davis, the Director of the Committee for the Nation's Health—a leftist organization, the principal purpose of which is to secure the passage of this kind of legislation. Doctor Davis has been in communication with a friend in London—a gentleman of very wide experience in the field of health care. On 11 February last, this English gentleman wrote Doctor Davis a letter, from which I shall now quote directly: "Now to carry out my promise to give you some information about the working of the new Health Service. Officially it is said to be working well; unofficially it is known that all is not well." How characteristic of government by politicians! "Officially it is said to be working well; unofficially it is known that all is not well." I continue quoting



*a rapidly  
acting*

***oral***

*estrogen*

More potent than any other available oral estrogen, ESTINYL\* provides unusually rapid relief from menopausal discomforts.

*Symptoms often subside within three days with one tablet of 0.05 mg. daily.*

ESTINYL imparts that special sense of well-being characteristic of the parent substance estradiol.

**ESTINYL**  
(ETHINYL ESTRADIOL)

Flexible tablet dosage ranges from one 0.02 mg. tablet to one 0.05 mg. tablet daily. When a fluid estrogen preparation is preferred, ESTINYL LIQUID is available, containing 0.03 mg. ethinyl estradiol per teaspoonful (4 cc.), in an extremely pleasant tasting vehicle.

\*®

*Schering* CORPORATION

BLOOMFIELD, NEW JERSEY

ESTINYL



from his letter: "The first thing that happened when the Act came into operation on July 5th, 1948 was a rush by the public to obtain the services which the Act laid down. But these did not exist . . . It was soon evident that a considerable number of people had waited for the 'appointed day' and then demanded the services. Their view was that they were paying for it and they were going to have it." Why not? Can any government justify taking the people's money for a service and then not deliver it? I continue to quote: "There was no increase in the number of (hospital) beds and there was a shortage of medical and nursing staff. The latter (i.e., the shortage of staff) is still giving us a headache. As a result, the staff is overworked and everyone is irritable. This, combined with the changed attitude of the public because they are paying for something which cannot be supplied to them immediately on demand, is definitely having a bad effect on the working of the Scheme . . . One of the greatest objections raised against the service is the waste of time in getting decisions from the central authorities. Whereas, before the Act, the Committee of each hospital (i.e., the governing board) and the chief executive officers were able to give quick decisions because they were on the spot, under the Act they have not the authority to decide upon more than ordinary every-day-to-day routine matters." Does not that sound exactly like our own Federal Government system of control? There is a great similarity among governments.

I continue to quote: "As to cost—the original estimate . . . has gone haywire. Dental service, estimated at 7 million pounds, is costing 19 million pounds, and would have been higher if the Minister had not drastically cut the fees payable to dentists." Now, there is the totalitarian touch for you! When the service begins to cost too much, the Government drastically cuts the fees it will pay for service. Is this what we are coming to in this country?

But here is the real meat of the matter to me. I continue to quote: "One thing that is very noticeable is the loss of the human or personal touch. There is an official air about everything, and every officer is standing on his position and authority . . . I am much afraid the hospitals are going to consider administrative efficiency and keeping within the rules as being of far greater importance than personal attention to the patient."

There you have it—loss of the human touch—assembly line technique in medical care—more attention to regulations than to care of the patient. You say that can never happen here. Well, it has happened here! Those identical words describe exactly the situation in our own Veterans' hospitals before General Bradley changed it. How familiar those words are to me!

Now, you may think the writer of this letter has always been opposed to compulsory health insurance, and consequently can see no good in it because of his prejudice. So I shall quote one

more from his letter: "Basically, the principal . . . of a comprehensive health service for the nation is as sound as ever, but the practical application of the principle leaves much to be desired." Here is the picture of the disillusioned zealot—the idea is good, but it just won't work.

#### THE DEATH RATE

I stated some minutes ago that the objective of any health program should be the reduction in disability and the lengthening of life, but that the proponents of compulsory health insurance appear to be making compulsory health insurance itself the objective. Throughout "The Nations Health" is reiterated the theme that the principal reason that our death rates are lower than they are is that the economic level of so much of our population is too low to permit the purchase of good medical care. I now quote from "The Nation's Health": "The quality and amount of care given to the needy, and available to all, depends upon the income level of the community in which they live (p. 7) . . . If we had enough medical manpower and hospitals everywhere, and a better system of financing medical care . . . our present total of 1,400,000 deaths could be sharply reduced (p. 8) . . . If we continue in the present pattern, it is true that there will be gradual improvement in some parts of the country but in general the gains will come in those areas which already have a relatively high level of health service." (p. 12)

Now, as Al Smith was want to say, "Let's look at the record." The three States with the highest per capita income are Nevada, New York and California. The three states with the lowest per capita income are Mississippi, Arkansas and South Carolina. Nevada and Arkansas were admitted to the Registration Area of the United States too recently to be of use in this study. So, I shall consider the States with the second and third highest per capita income—New York and California—and the states with the lowest and third lowest per capita income—Mississippi and South Carolina.

In the twenty-seven years between 1920 and 1946, inclusive (the latest published experience), the death rate in New York and California declined 23 per cent. During those same twenty-seven years, the death rate in Mississippi and South Carolina declined 32 per cent. In other words, the death rate declined almost 50 per cent faster in the low-income states than it did in the two high-income states. Furthermore, the two low income states have a very high proportion of Negroes in their population. Negroes have an appreciably higher death rate than whites. But, despite this handicap, almost 50 per cent more lives have been saved, in proportion to population, in the low-income states than were saved in the high-income states. Furthermore, in 1946 the death rate in the two low-income states was 15 per cent lower than it was in the two high-income states.

It simply is not true that thousands of people



**HABIT TIME**

ONE PINT PKG. 1D96

**Wyeth**

**Petrogalar<sup>®</sup>**

**Aqueous Suspension of Mineral Oil Plain**

Active Ingredient: Mineral Oil 65%.

**DIRECTIONS:** Adults, one tablespoonful. Children over six years old; one teaspoonful. May be thinned with water, milk or fruit juice if desired.

**CAUTION:** To be taken only at bedtime. Do not use at any other time or administer to infants, except upon the advice of a physician.

**SHAKE WELL**

*Wyeth* INCORPORATED • PHILADELPHIA • PA.

1376374

**Wyeth**

PHILADELPHIA 3, PA.

ACCEPTED FOR PHARMACY CHEMISTS



die every year in this country because of inability, financial or otherwise, to obtain medical care. It is true, perhaps, that thousands die because of personal negligence or procrastination in seeking proper medical care. It may well be true that some die because of a want of skill on the part of the physician they choose. But here is not the slightest evidence that there is any significant number of people dying today because it is impossible for them to obtain medical care.

Those who contend the opposite confuse medical attention with medical care. I am fully aware that there are millions of people who cannot afford to run to a doctor's office every time they need a cathartic, or to call a pediatrician to their homes every time the baby sneezes. As a matter of fact, the world would be much better off if no one had money to waste this way—if the rich were denied medical attention except at the times they needed medical attention care.

#### CLAIMS NOT AUTHENTICATED

This propaganda that millions of our people are suffering and thousands dying because of inability to obtain necessary medical care reminds me of the Belgian atrocity stories of World War I. You will remember that propaganda broadcast throughout Allied countries that thousands of Belgian children had been mutilated by the occupying Germans. When these stories were investigated after the war, every Belgian villager was sure that they were true—he had it upon the most reliable evidence—but they had always happened in another village, never in his own village. And now we are being propagandized in exactly the same way by Government officials at the expense of the taxpayer. I should like to have authenticated records of only a few hundreds of these cases—not thousands. But, like the tortured Belgian children, they seem always to have occurred in the next town.

One element of the compulsory health insurance program of the Federal Security Administration that is being carefully kept secret is its cost. By two independent methods of approach to the problem, careful investigators have estimated the cost to be \$100 per capita per annum, when the program is in full operation. This is 15 billion dollars a year. The payroll deductions and employer contributions fixed by the Federal Security Administration will produce 6 billions per year. Thus the contributions to the fund will pay no more than 40 per cent of the cost. Here I would point out again that this huge cost is not for necessary medical care but largely to satisfy the capricious desire for medical attention for inconsequential ailments. In the present state of our national budget, can any intelligent citizen advocate adding 9 billions of dollars per year for the sole purpose of gratifying the demands of neurotics, malingerers and chiselers?

However, do not let the evidence of bad faith on the part of the proponents of compulsory health insurance obscure the fact that there is a pressing need in this country for a mechanism that will ease the burden of necessary and expensive medical care. The cost of medical care has risen steeply in the past ten years—and for two reasons. First, there is the general rise in costs—or decline in value of the dollar, as you prefer—with which you are all familiar. In addition, medical care has become infinitely more complex and thereby very much better. Just as the airplane costs more than the stage coach, so medical care of today costs more than what passed for medical care only a few years ago. Diagnosis is no longer a matter of a glance at the tongue and a thump on the chest. It is often a complex technique requiring a number of people in laboratories in addition to the physician at the bedside. Diagnosis is much more accurate and treatment much more effective—both of which are reflected in our rapidly increasing length of life—and the improvements are well worth the higher cost. Just as increased cost of air travel will not drive us back to the stage coach, so increased cost of medical care will never drive us back to primitive medical practice. We must find another solution to this problem.

In fact, we have found another solution to the problem. The necessity for medical care is a risk which is unpredictable in the individual case but predictable with surprising accuracy in the mass—just as the risk from loss by fire, by marine disaster, or by tornado. In other words, the need for medical care is an insurable risk.

Medical care insurance has been working with reasonable success for some twenty years. I do not say that it is perfect, but I can and do say that it is improving all the time, and that the day is not far off when it will meet every real need of our people.

The question of the necessity for medical care insurance is no longer an issue. The principle of medical care insurance has been enthusiastically accepted by the great majority of our people. Already, some 60 million Americans are protected to some degree by some kind of medical care insurance. The only question yet at issue is whether medical care insurance shall continue as a voluntary effort in a free-enterprise system or whether it shall be replaced by compulsory health insurance in a socialistic state. Let no one dodge the crux of this issue—once we have compulsory health insurance, we have a socialistic state. Of course, for a time there will continue to exist remnants of a free-enterprise system; but once the state becomes socialistic, as it does when it accepts the principle of compulsory health insurance, these remnants of free enterprise will be subjected to a "mopping-up" operation just as is now going on in England. England has gone socialistic—period. What still remains of free enterprise there is rapidly being absorbed into the general pattern of socialism.



## NO RETRACING OF STEPS

Experiments in socialism would teach us by that best of schools—experience. They would be very much worth while for us to try, except for one thing. This is that such experiments are impossible because they cease to be experiments the moment they are launched. There is no retracing of steps taken along the road to socialism. No nation has turned from socialism save through bloody revolution—whether the blood has been spilled on the battlefield as in Spain, or in torture chambers as in Nazi Germany. All such revolutions have been extreme, like the swing to Phalangism in Spain, Fascism in Italy, and Naziism in Germany. I believe fully that, if the United States does become socialistic—which God forbid—our people will not long remain tolerant of such government. But I shudder to contemplate the form their reaction must take when they decide to throw off the shackles upon their freedom. We are not a com-

placent people. We can be deceived and cajoled into acceptance of false gods, but a day of reckoning will surely come.

Time does not permit me to present the complete case against compulsory health insurance. I have had to confine myself to a few of its inequities. Were I not so concerned over the disastrous consequences of compulsory health insurance, I could find amusement in watching the frantic efforts of some of our Members of Congress to place this keystone in what Lenin called the arch of the Socialistic state while parading before their constituents in the borrowed ill-fitting raiment of statesmen in the American tradition. I think it is just as dishonest and just as reprehensible to attempt to buy votes with promises of Government handouts as it is to buy them openly with hard cash; but this seems to have become the political fashion some 16 years ago—the New Look in politics as well as the New Deal. If it continues, the Lord only knows where we shall end up.

## FIND STREPTOMYCIN EFFECTIVE AGAINST BACILLARY DYSENTERY

Treatment of shigellosis, a major form of bacillary dysentery, with streptomycin produces prompt relief from the disease, according to a study made by five Washington, D. C., physicians under a grant from the U. S. Public Health Service.

Writing in the September 17 *Journal of the American Medical Association*, Drs. Sidney Ross, Frederic G. Burke, E. Clarence Rice, Harold Bischoff, and John A. Washington say that lowering of temperature and reduction in diarrhea usually occurred in acutely ill patients in twelve to twenty-four hours after oral streptomycin therapy was begun.

All thirty-four patients treated with streptomycin were children, ranging in age from 3 months to 12 years. All had an uneventful recovery from the disease

except five patients who had either a relapse or a reinfection within one month after discharge from the hospital, the doctors say, adding: "It would require a larger series than ours to state that streptomycin is superior to sulfadiazine. However, oral administration of streptomycin could be used advantageously in patients with a sulfonamide-resistant strain of organisms as well as in those cases in which there exists a sensitivity to sulfonamide compounds.

"One may take cognizance of the relatively higher incidence of shigellosis in military personnel, especially in the tropical areas, coupled with the frequent hazard of administering a sulfonamide drug to dehydrated patients. In these conditions, orally administered streptomycin may be found to be of considerable use as a substitute drug."

## ANTIBIOTIC DRUG PROVES VALUABLE FOR SKIN DISEASE

Successful use of an antibiotic drug, bacitracin, for impetigo and other skin diseases is reported in the September 17 *Journal of the American Medical Association*.

Bacitracin is thought to be especially valuable because it apparently causes few allergic reactions, says Drs. Jack L. Derzavis of Georgetown University School of Medicine, Washington, D. C., and J. Sidney Rice and Louis S. Leland of the U. S. Army Medical Corps, Washington, D. C.

In contrast, use of sulfa drugs and penicillin for skin diseases has the drawback that some patients become hypersensitive to these substances which they may need later for severe infections, such as pneumonia.

To determine human sensitivity to bacitracin, the doctors made patch tests of 150 adults by applying a small amount of the drug to the skin for forty-eight hours. All of the tests were negative for reaction to bacitracin.

A fortnight later, the doctors say, fifty of these same persons were retested by the patch method on the same site for another forty-eight hours. All tests sites were again normal after the patches were removed.

"These results seemed indicative of low allergenicity and were subsequently corroborated by the occurrence of only one case of dermatitis of the contact type among the 138 patients subsequently treated with bacitracin ointment," the doctors point out.

Only skin diseases which respond well to treatment with penicillin and the sulfa drugs were treated with bacitracin. Of the 138 patients, 128 were cured by the newer antibiotic drug, five were improved, and only five failed to improve.

Results against contagious impetigo are especially noteworthy, the doctors emphasize. Many of these eruptions were cured in forty-eight hours after treatment with bacitracin was begun.

## PRESIDENT'S PAGE

One of the planks in the American Medical Association's twelve point program calls for greater emphasis on a program of industrial medicine and prevention of accidents. The Association's Committee on Industrial Health has



arranged for an outstanding program in this important field to be presented Tuesday, October 11, 12, 1949.

A Symposium on Industrial Health will be presented at Washington and St. Louis Schools of Medicine for the medical students on the afternoon of October 11. The same program will then be presented at the St. Louis Medical Society Auditorium beginning at 8:30 p. m. the same day. The program will be presented in Kansas City on October 12.

The program is outlined on page 732 of this issue of THE JOURNAL. The program was arranged with the cooperation of the medical faculties of the two Universities. The members of the Committee and the Chairman, Vincent T. Williams, M.D., are to be complimented for this outstanding contribution to medical education.

All members are invited and urged to attend the evening program at the St. Louis Medical Society Auditorium, Tuesday, October 11, 8:30 p. m.

*Wallis Smith.*



# THE JOURNAL

of the

Missouri State Medical Association

623 Missouri Bldg. Telephone: Newstead 0404-05

Subscription . . . \$3.00 a year in advance

*Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent.*

OCTOBER, 1949

## EDITORIALS

### MISSOURI STATE MEDICAL ASSOCIATION VISITS THE MISSOURI STATE FAIR

Three hundred and fifteen thousand was the compiled attendance at the 1949 Missouri State Fair, August 21 through 28. Of this number, a large portion viewed the Missouri State Medical Association Exhibit which was presented as a part of the lay educational program of the State Association's Committee on Health and Public Instruction. The exhibit was housed in a 20 by 20 foot tent located just east of the educational building along one of the main thorough-fare pathways.

The display was comprised of two parts embrac-

ing two definite purposes. One part of the exhibit had as an objective the presenting of practical and interesting medical and scientific information to a cosmopolitan lay audience. This was satisfactorily accomplished, we think, through that part of the display embracing pictures and descriptive information on "Diseases Transmitted from Animals to Man," which was made available through the co-operation of the Bureau on Scientific Exhibits of the American Medical Association. The other part of the exhibit was based on the educational campaign of the American Medical Association in opposition to National Compulsory Sickness Insurance. The procedure in this instance was to display charts and other materials showing the advance in medical science, under the American free enterprise system, as evidenced by our increased average life span and lowered morbidity and mortality rates in many diseases. Booklets and pamphlets against what is commonly termed "Socialized Medicine" along with informational material on Blue Cross and Blue Shield were well distributed.

The main feature of the literature distribution procedure was the offering of the 19 by 19 inch picture of "The Doctor," furnished by Whitaker and Baxter of the American Medical Association Educational Campaign, as a free souvenir to those visiting the exhibit. It was suggested to those receiving these pictures that they might well be framed and used to adorn the home, school or place of business.

Many of the exhibit visitors commented on their



personal pleasure in seeing this type of an exhibit and used the opportunity to discuss the issue of Voluntary vs. Compulsory Health Insurance as well as the over-all issue of the Welfare State.

### PHYSICIAN HEAL THYSELF

The medical profession is engaged in a crusade against the invasion of its rights to treat the sick in the best possible manner and with the least amount of paternalistic bureaucratic governmental interference.

The successful attainment of this ambition will necessitate the intelligent support of every physician and must exceed financial or vocal support. It should not be forgotten that a physicians' actions always speak louder than his words. Every physician is, in a sense, a public relations counselor for himself and his profession. He, along with his fellows, must take cognizance of the complaints and fears of the public. He must realize that his understanding of medical problems is far greater than that of his patients. What he knows to be nonsensical and ridiculous may be a matter of urgency and seriousness to the patient and a clear explanation using homely similes and a clear, lucid vocabulary will do much to relieve the mind of the patient and the family.

Perhaps a more disturbing factor to the patient than the seemingly complicated language of the medical profession is the thought that physicians are not available when needed. It is well established that many of the complaints in this regard are not valid but there are enough physicians who will not make night calls and who will not make home calls on new patients to lend some weight to the fear which is developing in the public mind. It is of course the right of any physician to choose his patients, make calls or not make calls as he sees fit or deems necessary, but no physician has the right to be calloused, indifferent or cruel in his refusal. Physicians have at least a moral obligation to see that patients get adequate medical care when they want it and if we can not give such care at a particular time we must explain the situation to the patient and either secure a physician for the patient or recommend some one for them to call. If necessary in smaller communities, a schedule or agreement can be worked out, in large communities the various exchanges should have a list for such situations.

In the final analysis the relief of the patient whether suffering pain or foolish fear is the physician's responsibility. To shirk this responsibility whether the physician be a specialist, professor or practitioner is to shame a great profession and bring unnecessary censor to it.

### NEWS NOTES

Lloyd Stockwell, M.D., Kansas City, has been appointed a member of the scientific exhibits committee for the annual meeting of the American

Urological Association in Washington, D. C., May 29 to June 1, 1950.

The Missouri Society of Pathologists will have its first official meeting in Columbia on October 21 at the Daniel Boone Hotel beginning with a dinner at 6:30 p. m. Edward H. Reinhard, M.D., St. Louis, will speak on "Chemotherapy of Malignant Disease." Officers of the society are M. Pinson Neal, M.D., Columbia, president; Russell W. Kerr, Kansas City, president-elect; Henry C. Allen, M.D., St. Louis, secretary.

Richard L. Sutton, Jr., M.D., Kansas City, was the guest speaker at a meeting of the resident staff of the Veterans Administration Hospital, Wadsworth, Kansas, on July 28. He spoke on "Contact Dermatitis and Its Complications."

O. Jason Dixon, M.D., Kansas City, was a guest speaker at the Elkhorn Valley Medical Society meeting in Norfolk, Nebraska, on August 18. He spoke on "A Clinical Analysis of Histaminic Cephalalgia."

David Littauer, M.D., Kansas City, was inducted as a member of the American College of Hospital Administrators at a meeting in Cleveland on September 25.

### MUSINGS OF THE FIELD SECRETARY

Counted among the many who looked over the State Medical Association's exhibit at the recent State Fair in Sedalia were 24 physicians. Included in this number were the President and President-Elect of the State Association.

A number of people visiting the exhibit, when given one of the pictures of "The Doctor," remarked that this was the picture in their "old grammar book" or the picture they had seen in the office of Doctor so and so.

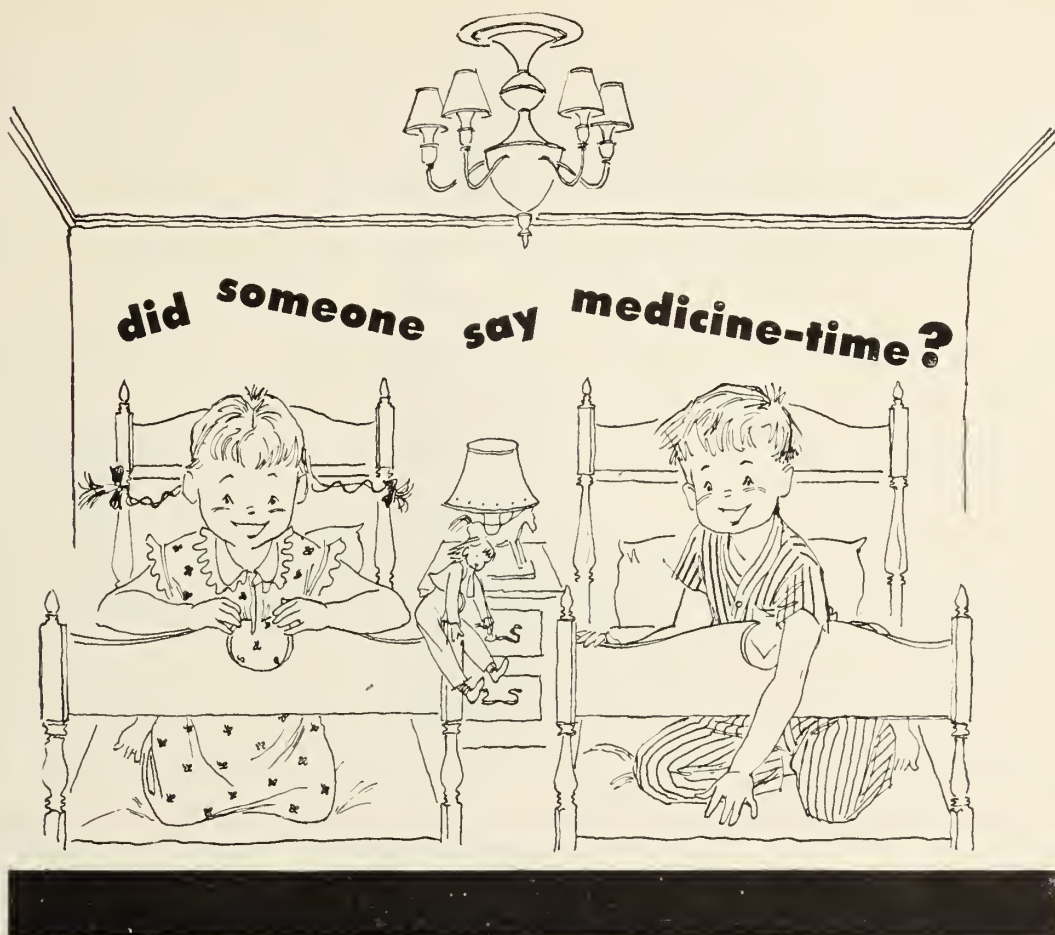
Some of the visitors asked why the State Medical Association did not do more exhibiting at occasions as fairs and other meetings and conventions where large lay groups are involved. Their idea in this respect was the opportunity offered the Association for lay education media—media suited to reaching scores of persons not now being reached. Looks like they might have been talking about some sort of public relations.

From remarks made by school teachers receiving the 19 by 19 inch pictures there should be, this fall, many pairs of young eyes inspecting a neatly framed school-wall picture symbolizing the beloved family physician.


### DEATHS

Jaudon, Benjamin Y., M.D., University City, a graduate of Columbia University College of Physicians and Surgeons, 1896; Fellow of the American Medical Asso-





● A DUOZINE *Dulcet* Tablet is medicine all right—two potent sulfonamides—but to the child it's a pale orange cube that tastes like tutti-frutti candy all the way through. Each DUOZINE *Dulcet* Tablet contains 0.15 Gm. sulfadiazine and 0.15 Gm. sulfamerazine—as stable and accurate as it is possible to compound. The antibacterial effect is the same as 0.3 Gm. of either drug,

but the risk of crystalluria is only as great as that of 0.15 Gm. of one of the sulfonamides. Indications and dosage are the same as for unflavored tablets.  DUOZINE *Dulcet* Tablets are available on prescription through your pharmacy. Write for literature today. ABBOTT LABORATORIES, North Chicago, Ill.



● Specify Abbott's Sulfadiazine-Sulfamerazine Combination

 **Duozone** *dulcet*® tablets

TRADE MARK

® MEDICATED SUGAR TABLETS, ABBOTT

(Sulfadiazine 0.15 Gm.—Sulfamerazine 0.15 Gm. Combined, Abbott)

ciation; honor member of the St. Louis Medical Society; aged 75; died July 1.

**McCall, Greene D., M.D.**, Fulton, a graduate of Barnes Medical College, 1895; honor member of the Callaway County Medical Society; aged 76; died July 22.

**Hollis, Luther T., M.D.**, Kansas City, a graduate of the University Medical College of Kansas City, 1896; Affiliate Fellow of the American Medical Association; honor member of the Jackson County Medical Society; aged 77; died August 8.

**Mellies, Chester J., M.D.**, Sikeston, a graduate of St. Louis University School of Medicine, 1933; member of the Scott County Medical Society; aged 44; died August 12.

**Smith, Dudley R., M.D.**, St. Louis, a graduate of Washington University School of Medicine, 1923; Fellow of the American Medical Association; member of the St. Louis Medical Society; aged 51; died August 16.

**Gray, Samuel H., M.D.**, St. Louis, a graduate of Columbia University College of Physicians and Surgeons, 1923; Fellow of the American Medical Association; member of the St. Louis Medical Society; aged 52; died August 17.

**Neuhoff, Fritz, M.D.**, St. Louis, a graduate of Washington University School of Medicine, 1887; Fellow of the American Medical Association; honor member of the St. Louis Medical Society; aged 86; died August 20.

**Rosenberger, Charles F., M.D.**, Clayton, a graduate of St. Louis University School of Medicine, 1927; Fellow of the American Medical Association; member of the St. Louis County Medical Society; aged 54; died August 23.

**Lusk, Charles A., M.D.**, Butler, a graduate of the University Medical College of Kansas City, 1910; member of the Bates County Medical Society; aged 76; died August 28.

## MISCELLANY

### TUBERCULOSIS ABSTRACTS

*Issued Monthly by the National Tuberculosis Association*

### TUBERCULOSIS MORTALITY IN THE UNITED STATES, 1947

In 1947, there were 48,064 deaths from tuberculosis in the United States. The death rate was 33.5 per 100,000 population, which was 8 per cent below the rate for 1946.

This decrease in the tuberculosis death rate continued the downward trend which has prevailed with few interruptions since 1910. Of the total deaths from tuberculosis in 1947, more than 90 per cent were attributed to respiratory tuberculosis. For both respiratory and nonrespiratory infections, mortality was much greater for nonwhites than for whites and greater for males than for females.

Death rates for tuberculosis in the white population and for nonwhites were lower in the young adult years than in the older age groups, while for nonwhite females highest rates occurred in the young adult group. Among all young adults, the rates were higher for females than for males; among older persons, the rates were much higher for males. The rates for nonwhites were far above those for whites in all age groups except 75 years and over.

Death rates for tuberculosis were lower in 1947 than

in 1939-41 for almost all population groups. In general, greater gains were made by females than by males, and by younger than by older persons. The only increases in rates were for males in the age groups over 55 years and for nonwhite females 65-74 years of age. Tuberculosis death rates in 1947 by State of residence ranged from 11.8 for Iowa to 100.0 for Arizona.

*Tuberculosis Mortality in the United States, 1947, Sara A. Lewis, Public Health Reports, April 1, 1949.*

### TUBERCULOSIS MORTALITY IN OLDER AGE GROUPS

Mortality statistics compiled for 1947 show that tuberculosis death rates have again declined in the United States. In 1947 the rate was 33.5 per 100,000, as compared to 36.4 in 1946. These gratifying figures show progress is still being made toward the goal—the disappearance of tuberculosis from the United States.

An analysis of the 1947 mortality data brings out a fact which is very significant. The proportion of deaths from tuberculosis among people over 45 years of age is steadily increasing.

For many years tuberculosis was a disease primarily of young adults between the ages of 15 and 44—people in the prime of life, wage earners, parents of small children, young people just starting their life work. In 1900, for example, almost two out of three of all the reported tuberculosis deaths were in this age group. Only one out of four of those who died was 45 or over. By 1940, over half of the tuberculosis deaths reported still took place among people between the ages of 15 and 44, but deaths of those 45 and older had risen to 42 per cent of the total.

An important factor in this shift has been the fact that mortality rates have declined more slowly in the older age groups than in the younger and the greater number of older people in the country's population further accentuates the degree of change.

The shift toward older ages at death has great significance for tuberculosis case-finding activities. A study of a recent mass X-ray survey made in a Georgia county contains one of the few available tabulations of the ages of those X-rayed. It was disappointing to see the small percentage of older people who took part in that survey. Although 62 per cent of the population of the county in the age group 45-54 were X-rayed, the percentage fell rapidly in older age groups; only 17 per cent of those 75 and over participated.

Obviously there are many reasons why people do not take part in mass surveys. Many of the very old people could not participate because of illness or incapacity. Many others not so old, however, failed to be examined because they think tuberculosis is a disease they have "outgrown." They must be cautioned that those over 45 are subject to tuberculosis just as younger people are.

Control workers should be reminded that older people form a major source of infection in the population. Special efforts are needed to discover the disease among those over 45 for the protection both of individuals and of the community. All men and women, young and old, should be urged to have periodic X-ray examinations either in mass surveys or as part of their annual physical examination by private physicians. Only by special emphasis and special efforts can all cases of tuberculosis be discovered, isolated, and brought under treatment.

*Tuberculosis Mortality in Older Age Groups, Robert J. Anderson, M.D., Public Health Reports, April 1, 1949.*



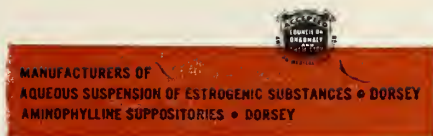


# Dorsey

*going your way*

FOLLOWING a parallel route to a similar destination, the ethical pharmaceutical maker necessarily keeps the progress and direction of scientific medicine constantly in view.

For a closer look at medicine's progress and full comprehension of its implications, the Smith-Dorsey Company has expanded its research facilities, secured increased research grants and added research personnel.



**THE SMITH-DORSEY COMPANY • Lincoln, Nebraska**

BRANCHES AT LOS ANGELES AND DALLAS

# INDUSTRIAL HEALTH

A Symposium on Industrial Health will be presented under the auspices of the Missouri State Medical Association's "Committee on Industrial Health" and through the cooperation of the medical faculties of Washington University and St. Louis University Schools of Medicine on Tuesday, October 11, 1949. The same symposium will be presented in Kansas City on Wednesday, October 12.

## FOR

Medical Students at Washington University and St. Louis University Schools of Medicine.

## FOR

Industrial Hygienists  
Industrial Physicians  
Industrial Nurses  
Safety Directors  
Safety Engineers

## TIME

2:00 p. m.

## PLACE

Washington University School of Medicine

## TIME

4:00 p. m.

## PLACE

St. Louis University School of Medicine

## TIME

8:30 p. m.

## PLACE

St. Louis Medical Society Auditorium

## MODERATOR

VINCENT T. WILLIAMS, M.D.  
Kansas City, Mo.  
Chairman, Committee on Industrial Health,  
Missouri State Medical Association.

## SPEAKERS

A. J. LANZA, M.D.  
New York, N. Y.  
Professor of Industrial Medicine, New York  
University School of Medicine;  
Chairman, Council on Industrial Health,  
American Medical Association.

Subject: **Education in the Field of Industrial Medicine.**

HAROLD A. VONACHEN, M.D.  
Peoria, Ill.

Medical Director, Caterpillar Tractor Company,  
Peoria, Ill.;

Member, Council on Industrial Health,  
American Medical Association;

President, American Association of Industrial  
Physicians and Surgeons.

Subject: **Physical Rehabilitation in Industry—Our Challenge.**

DUDLEY A. IRWIN, M.D.  
Pittsburgh, Pa.

Medical Director, Aluminum Company of America,  
Pittsburgh, Pa.;

Formerly Assistant to Dr. Banting,  
Department of Medical Research,  
University of Toronto, Canada.

Subject: **Basic Science Is Necessary in a Good Health Care Plan.**

MAX R. BURNELL, M.D.  
Detroit, Mich.

Medical Consultant to General Motors Corporation,  
Detroit, Mich.

Subject: **Broad Horizons in Industrial Medicine.**



DUDLEY A. IRWIN, M.D.





VINCENT T. WILLIAMS, M.D.



MAX R. BURNELL, M.D.



HAROLD A. VONACHEN, M.D.



A. J. LANZA, M.D.

**COUNTY SOCIETY HONOR ROLL 1949**

(Societies which have paid Dues for All Members and date placed on Honor Roll)

Miller County Medical Society, December 8, 1948.  
Camden County Medical Society, Dec. 10, 1948.  
Benton County Medical Society, Dec. 14, 1948.  
Ste. Genevieve County Medical Society, December 16, 1948.  
Laclede County Medical Society, Dec. 18, 1948.  
Dallas, Hickory, Polk Counties Medical Society, December 23, 1948.  
Carter-Shannon County Medical Society, December 30, 1948.  
Lewis, Clark, Scotland Counties Medical Society, January 3, 1949.  
Audrain County Medical Society, January 5, 1949.  
Webster County Medical Society, January 8, 1949.  
Harrison County Medical Society, Jan. 10, 1949.  
Mississippi County Medical Society, Jan. 12, 1949.  
Howard County Medical Society, Jan. 15, 1949.  
Henry County Medical Society, January 16, 1949.  
Morgan County Medical Society, Jan. 19, 1949.  
Callaway County Medical Society, Jan. 21, 1949.  
Carroll County Medical Society, January 24, 1949.  
Pettis County Medical Society, January 26, 1949.  
Holt County Medical Society, January 29, 1949.  
Cape Girardeau County Medical Society, February 1, 1949.  
Bates County Medical Society, February 8, 1949.  
Mercer County Medical Society, February 8, 1949.  
Pike County Medical Society, February 9, 1949.  
Clinton County Medical Society, Feb. 15, 1949.  
St. Francois-Iron-Madison-Washington-Reynolds Counties, February 18, 1949.  
Montgomery County Medical Society, February 24, 1949.  
South Central Counties Medical Society, February 28, 1949.  
Perry County Medical Society, March 10, 1949.  
Andrew County Medical Society, March 12, 1949.  
Cass County Medical Society, March 15, 1949.  
St. Louis County Medical Society, April 27, 1949.

**SOCIETY PROCEEDINGS****NINTH COUNCILOR DISTRICT**

**E. C. BOHRER, WEST PLAINS, COUNCILOR**  
**South Central Counties Medical Society**

The South Central Counties Medical Society met at the El Patio Hotel in Cabool, August 19, for dinner, with the following members and visitors present: Drs. J. R. Mott, Hartville; J. A. Fuson, Mansfield; R. A. Ryan, R. W. Denney, S. W. Connor, T. B. Dailey and A. C. Ames, Mountain Grove; Garrett Hogg, Jr., Cabool; T. J. Burns, Houston; Leslie Randall, Licking; Rollin H. Smith and C. F. Callihan, West Plains; and the speakers, Dr. William J. Stewart, Columbia, and Dr. John Modlin, Columbia; and three visitors, medical students, Jacob Wiles, Bakersfield, and Francis C. Huss and Howard Rodgers, Licking.

After dinner the meeting came to order in the office of Dr. Hogg and the minutes of the last meeting were read and approved.

Dr. Stewart spoke on "Poliomyelitis," emphasizing that there is more that is not known than is known.

Dr. Modlin spoke on "Cancer" and showed a lot of pictures and told of some radical operations that are too new to know yet whether they are practical or advisable.

A vote of thanks was given the speakers and the meeting was adjourned to meet in West Plains, September 16, when Dr. Callihan is to arrange the program.

A. C. AMES, M.D., Secretary.

**BOOKS RECEIVED**

**FOOT AND ANKLE, Their Injuries, Diseases, Deformities and Disabilities.** By Philip Lewin, M.D., F.A.C.S., Associate Professor of Bone and Joint Surgery, and Acting Head of Department, Northwestern University Medical School; Professor of Orthopaedic Surgery, Post-Graduate Medical School of Cook County Hospital; Attending Orthopaedic Surgeon, Cook County Hospital; Senior Attending Orthopaedic Surgeon, Michael Reese Hospital, Consulting Orthopaedic Surgeon, Municipal Contagious Disease Hospital, Chicago; Formerly Colonel, Medical Corps, Army of United States. With 389 Illustrations. Line Drawing by Harold Laufman, M.D., F.A.C.S., Associate in Surgery, Northwestern University Medical School; Formerly Major, Medical Corps, Army of the United States. Third Edition, Thoroughly Revised. Philadelphia: Lea & Febiger. 1947. Price \$11.00.

**The Mary E. Pogue School**

Complete facilities for training Retarded and Epileptic children educationally and socially. Pupils per teacher strictly limited. Excellent educational, physical and occupational therapy programs.

Recreational facilities include riding, group games, selected movies under competent supervision of skilled personnel.

Catalogue on request.

G. H. Marquardt, M.D. Barclay J. Macgregor  
Medical Director Registrar

27 Geneva Road, Wheaton, Illinois  
(Near Chicago)



# DIGILANID...

*crystalline complex  
of whole leaf*

The dependable action of the total glycosides of *Digitalis lanata* whole leaf is provided by DIGILANID®, crystalline complex of lanatosides A, B and C, in regulated percentages.

Possessing the additional advantages of uniform potency, stability and virtual freedom from impurities, DIGILANID may be regarded as "crystalline whole leaf."

# DIGILANID

Tablets • Liquid • Ampuls • Suppositories



**dependable and potent**

*Originality • Elegance • Perfection*

**SANDOZ PHARMACEUTICALS**  
Division of SANDOZ CHEMICAL WORKS, INC.  
NEW YORK 14, N.Y. • CHICAGO 6, ILL. • SAN FRANCISCO 8, CAL.

## MILWAUKEE SANITARIUM

WAUWATOSA, WISCONSIN

### FOR NERVOUS DISORDERS

Maintaining the highest standards for more than a half century, the Milwaukee Sanitarium stands for all that is best in the care and treatment of nervous disorders. Photographs and particulars on request.

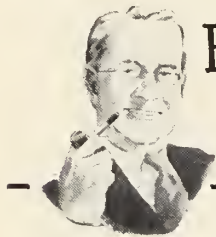
(Chicago Office— 1117 Marshall Field Annex  
Wednesday, 1-3 P. M.)

JOSEF A. KINDWALL, M.D.  
CARROLL W. OSGOOD, M.D.  
WILLIAM T. KRADWELL, M.D.  
BENJAMIN A. RUSKIN, M.D.  
LEWIS DANZIGER, M.D.  
RUSSELL C. MORRISON, M.D.  
G. CHARLES SUTCH, M.D.  
RAYMOND HEADLEE, M.D.  
ARTHUR J. PATEK, M.D., Consultant  
G. H. SCHROEDER, Business Manager

COLONIAL HALL—One of the 14 Units in "Cottage Plan."



Advertisement



From where I sit  
by Joe Marsh

## Watch Out For The Symptoms!

*Laughed right out loud when I heard Hoot Davis had come down with Chicken Pox. A man of forty-five catching a kid's disease!*

I went to see him, armed with jokes about "second childhood" but forgot them fast when I got there. Hoot looked awful and had quite a fever.

*While we talked, I thought of how Chicken Pox is a lot like other "diseases"—diseases of the character, such as intolerance, self-righteousness or just plain ignorance. They're excusable in children, but when they come out in adults they're ten times as bad—and can be mighty "contagious."*

From where I sit, we should all watch out for the "symptoms"—little things like criticising a person's preference for a friendly glass of temperate beer or ale. We've seen freedom wither away in other countries, when individual intolerance was allowed to get out of hand and become a nationwide epidemic.

*Joe Marsh*

Copyright, 1949, United States Brewers Foundation

## A BIG TIME-SAVER FOR EVERY DOCTOR



**This handy booklet for new mothers was "built to doctors' orders". It contains blank forms for filling in your instructions and formulas.**

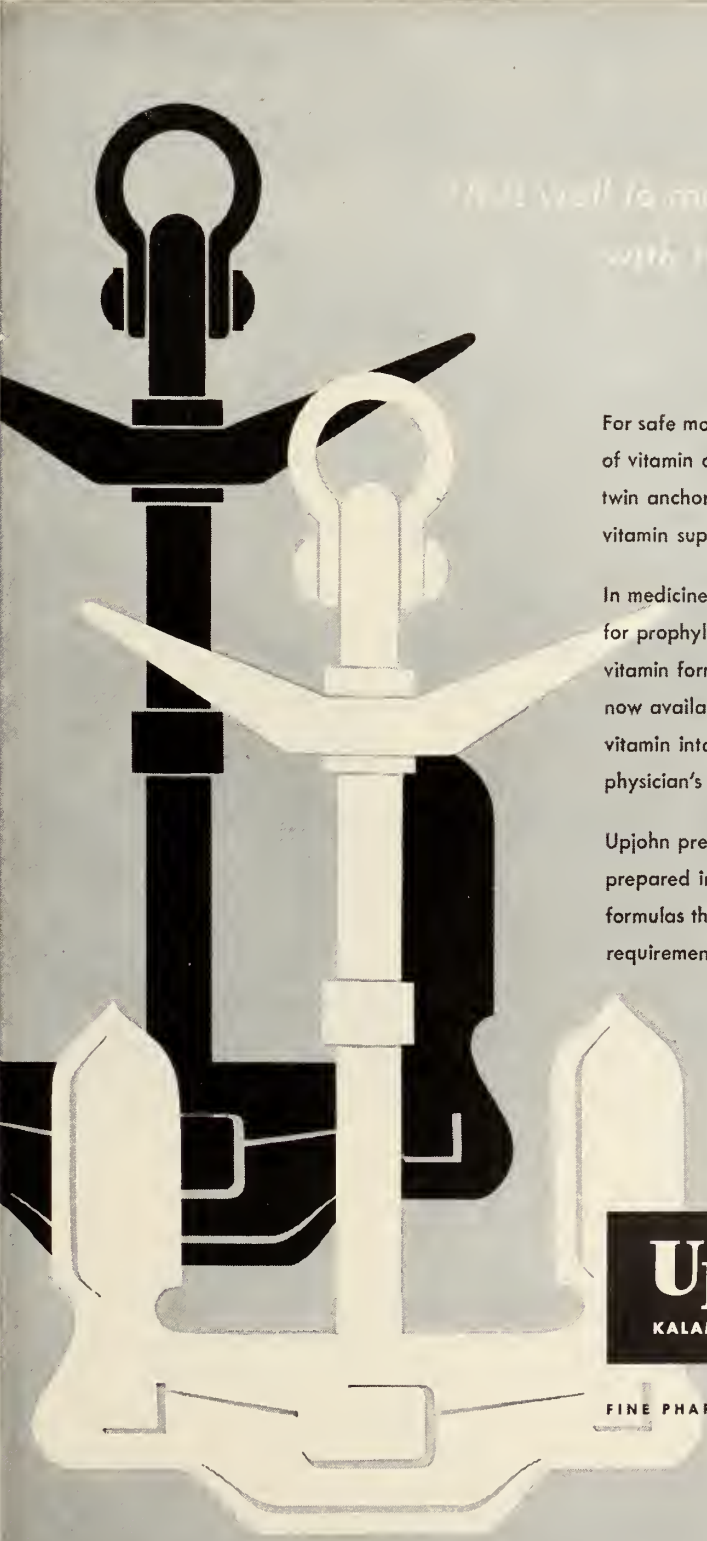
**It provides a permanent case-history record. A memo will bring you a sample...or as many as you want for your daily practice... without obligation.**

**Many doctors are prescribing "Daricraft Homogenized Evaporated Milk". It is always uniform, safe, sterilized, easy to digest, and high in food value and minerals. Daricraft contains 400 U. S. P. units of Vitamin D per pint.**



**PRODUCERS CREAMERY CO., SPRINGFIELD, MO.**





*"Well to meet your bark  
with two anchors."*

PUBLILIUS SYRUS, MAXIM 119

For safe mooring in the "snug harbor" of vitamin adequacy, the best twin anchors are balanced diet and vitamin supplementation.

In medicine as in surgery, for prophylaxis as for therapy, the vitamin forms and dosages now available place adequate vitamin intake under the physician's selective control.

Upjohn prescription vitamins are prepared in potencies and formulas that cover the varied requirements of modern practice.

**Upjohn**

KALAMAZOO 99, MICHIGAN

FINE PHARMACEUTICALS SINCE 1886

*Your* **LABORATORIES**  
*Our* **RESPONSIBILITY**

CLINICAL PATHOLOGY  
PATHOLOGIC ANATOMY

**DUNCAN LABORATORIES**

*Established 1924*

909 Argyle Bldg. **KANSAS CITY 6, MO.**  
230 Frisco Bldg. **JOPLIN, MISSOURI**

RALPH EMERSON DUNCAN, M.D.

MAURICE L. JONES, M.D.

In addition to diagnostic laboratory services, chemically accurate and clinically tested reagents, solutions, stains and culture media are available for immediate delivery.



# AUREO- MYCIN



*The Newest and  
Most Broadly Useful  
of the Antibiotics*

## **AUREOMYCIN** HYDROCHLORIDE LEDERLE

Aureomycin is now generally accepted as one of the most versatile antibiotics yet isolated. In addition to attacking the Gram-positive cocci with great effectiveness, it is useful against many Gram-negative organisms, particularly those of the coli-aerogenes group. It is also effective against rickettsial infections and certain diseases of unknown etiologies, such as primary atypical pneumonia. Aureomycin in solution with sodium borate has been found highly effective in the eye in a concentration of one-half per cent. Among others it is active against the diplobacillus of Morax-Axenfeld, Friedländer's bacillus, staphylococcus, pneumococcus, and *Hemophilus influenzae*.

LEDERLE LABORATORIES DIVISION AMERICAN Cyanamid COMPANY 30 Rockefeller Plaza, New York 20, N. Y.



Only \$26.50  
Complete

## COSMO CAUTERY COMPANY

4215 Virginia Ave.

St. Louis 11, Mo.

### COSMO CERVIX COAGULATOR

Cervical treatment by electro-coagulation with this unit is superior to other methods because the doctor can control the extent of coagulation and reach the deeply imbedded infections.

This unit will not create nauseating smoke and odor due to searing tissue and gives the doctor greater freedom of post-operative complications such as stenosis, excessive scar tissue, etc.

Furnished with leatherette carrying case and 3 interchangeable silver applicators for stripping, spotting and puncturing.

### COSMO CAUTERY UNIT

Removal of verucca, nevi, etc., with a Cosmo Cautery Unit provides a gentle, effective office treatment with a minimum of patient discomfort.

The unit is easy to operate; technic requires no anesthetic; heat is controlled and device shockproof. Usable around eyes and hairline; will not cause scar tissue.

Furnished with leatherette carrying case and 5 interchangeable silver applicators. The applicators are graduated in sizes to handle various sized blemishes and assure even sloughing.



Only \$22.50  
Complete

ONE YEAR GUARANTEE

Ask Your Dealer for Descriptive Literature

#### ST. LOUIS

A. S. Aloe Co.  
Hamilton-Schmidt Co.  
Edmund F. Hanley Co.  
Charles A. Schmidt Co.

#### KANSAS CITY

A. S. Aloe Co.  
Chas. Russell Co. Inc.  
Goetze-Niemer Co.

#### JOPLIN

Goetze-Niemer Co.

#### ST. JOSEPH

Goetze-Niemer Co.



One of Four Main Buildings

## GLENWOOD SANATORIUM

A Private Hospital for Care of Nervous and Mental Disorders, Alcohol and Narcotic Addictions.

Thoroughly equipped for all the approved therapeutic measures. Insulin, metrazol and electro shock used in selected cases.

Four main buildings for patients permit ample classification facilities. Large grounds composed of about fifty acres make many out-of-door activities possible.

Phone WEBster 1056

For full information, address

GLENWOOD SANATORIUM, Webster Groves, St. Louis 19, Mo.



# THE HIGH-PROTEIN INFANT FOOD



The incidence of mild protein deficiencies in children, predisposing toward infections and edema, is reported<sup>1,2</sup> much greater than generally realized. Infant and adolescent requirements—not only for tissue repair and maintenance, but also for growth—are much higher than in adulthood.<sup>3</sup> To insure adequate protein intake in infancy, DRYCO—Borden's high-protein infant food—is ideally suited as a basis for formula building. It furnishes *all the essential amino acids*. Its low fat content minimizes gastro-intestinal upsets due to fat intolerance, while its intermediate carbohydrate content lends itself for prescription with or without added carbohydrate. Quickly soluble in cold or warm water, DRYCO contains adequate vitamins A, B<sub>1</sub>, B<sub>2</sub> and D, plus essential milk minerals.

References: 1. Dodd, K. and Minot, A. S.: *J. Pediat.*, 8:442, 1936.  
2. Dodd, K. and Minot, A. S.: *J. Pediat.*, 8:452, 1936.  
3. Sahyun, M.: *Am. J. Dig. Dis.*, 13:59, 1946.

**BORDEN'S PRESCRIPTION PRODUCTS DIVISION**  
350 Madison Avenue, New York 17, N. Y.

In Canada write The Borden Company, Limited  
Spadina Crescent, Toronto.

DRYCO is made from spray-dried, pasteurized, superior quality whole milk and skim milk. Provides 2500 U.S.P. units vitamin A and 400 U.S.P. units vitamin D per reconstituted quart. Supplies 31½ calories per tablespoon. Available at all drug stores in 1 and 2½ lb. cans.



*The "Custom Formula"  
High Protein Infant Food*

WALKING COMFORT ASSURED IN

**LIMBS** *by* **ISLE**

*The* **W. E. ISLE**  
*Company*

ENTIRE SECOND FLOOR  
1121 GRAND AVE.  
KANSAS CITY, MO.  
VICTOR 2350



## Mullen Ambulance Company

PRIVATE AMBULANCE  
SERVICE

Local and Distant Trips  
Day or Night

5159 Delmar, ST. LOUIS Forest 1913

The Neurological Hospital,  
2625 The Paseo, Kansas City,  
Missouri. Operated by the Rob-  
inson Clinic, for the care and  
treatment of nervous and men-  
tal patients and associated  
conditions.

## FAITH HOSPITAL

A. J. SIGNORELLI, M.D.,  
*Medical Director*

GOodfellow 6262

2800 N. Taylor, St. Louis, Mo.

## The Norbury Sanatorium

Established 1901—Incorporated—  
Licensed—Jacksonville, Illinois

• ALBERT H. DOLLEAR, B.S., M.D., Superin-  
tendent. FRANK GARM NORBURY, A.M., M.D.,  
Medical Director. SAMUEL N. CLARK, M.D.,  
Physician. HENRY A. DOLLEAR, M.D., Physician.



### Maplecrest

• Pictured above — Restful, congenial home-  
like surroundings are combined with the most  
modern diagnostic and therapeutic equipment.

### Maplewood

• Pictured at left — Most comfortable homes  
for individuals requiring rest, scientific diagnosis  
and treatment. Fireproof construction.







## if she is one of your patients...

...She depends on your help for a speedy return to gainful occupation. Women seeking employment who are nervous, apprehensive and generally distressed by symptoms of the climacteric, may find it difficult to meet competition. "Premarin" offers a solution. Many thousand physicians prescribe this naturally-occurring, oral estrogen because...

1. Prompt symptomatic improvement usually follows therapy.
2. Untoward side-effects are seldom noted.
3. The sense of well-being so frequently reported tends to quickly restore the patient's confidence and normal efficiency.
4. This "Plus" (the sense of well-being enjoyed by the patient) is conducive to a highly satisfactory patient-doctor relationship.
5. Four potencies provide flexibility of dosage: 2.5 mg., 1.25 mg., 0.625 mg. and 0.3 mg. tablets; also in liquid form, 0.625 mg. in each 4 cc. (1 teaspoonful).



While sodium estrone sulfote is the principal estrogen in "Premarin," other equine estrogens...estrodial, equilin, equilinen, hippulin...are probably also present in varying amounts as water-soluble conjugates.

# "PREMARIN"



ESTROGENIC SUBSTANCES (WATER-SOLUBLE)  
also known as CONJUGATED ESTROGENS (equine)

**Ayerst, McKenna & Harrison Limited** 22 East 40th Street, New York 16, New York

## ACCIDENT • HOSPITAL • SICKNESS

**INSURANCE**

For Physicians, Surgeons, Dentists Exclusively



<b>\$5,000.00 accidental death</b>	<b>\$ 8.00</b>
\$25.00 weekly indemnity, accident and sickness quarterly	
<b>\$10,000.00 accidental death</b>	<b>\$16.00</b>
\$50.00 weekly indemnity, accident and sickness quarterly	
<b>\$15,000.00 accidental death</b>	<b>\$24.00</b>
\$75.00 weekly indemnity, accident and sickness quarterly	
<b>\$20,000.00 accidental death</b>	<b>\$32.00</b>
\$100.00 weekly indemnity, accident and sickness quarterly	

Cost has never exceeded amounts shown.

Also Hospital Expense for Members  
Wives and Children85c out of each \$1.00 gross income used for  
members' benefit**INVESTED ASSETS**      **PAID FOR CLAIMS****\$3,700,000.00**      **\$15,700,000.00**\$200,000.00 deposited with State of Nebraska  
for protection of our members.Disability need not be incurred in line of duty—benefits  
from the beginning day of disability**PHYSICIANS CASUALTY ASSOCIATION**  
**PHYSICIANS HEALTH ASSOCIATION**

47 years under the same management

400 First National Bank Building, OMAHA 2, NEBR.

**All worth while laboratory  
examinations; including—**

Tissue Diagnosis

The Wassermann and Kahn Tests

Blood Chemistry

Bacteriology and Clinical Pathology

X-Ray including Gastro-Intestinal Study and  
Gall Bladder Visualization

Basal Metabolism

Pregnancy Test

Electrocardiograms with interpretation

**National Pathological Laboratory**

RALPH L. THOMPSON, M.D., Director

601-616 University Club Bldg.

ST. LOUIS

Telephone JEFFerson 6088

**North Shore  
Health Resort**

Winnetka, Illinois

*on the Shores of  
Lake Michigan*A completely equipped sanitarium for the care of  
*nervous and mental disorders, alcoholism and drug addiction*  
offering all forms of treatment, including electric shock.**SAMUEL LIEBMAN, M.S., M.D.**

225 Sheridan Road

*Medical Director*

Phone Winnetka 211





**FULFILLING EVERY  
REQUIREMENT OF EFFECTIVENESS  
AND PATIENT-ACCEPTANCE**

*Ramses*  
TRADE MARK REG. U.S. PAT. OFF.  
**VAGINAL JELLY\***

- 1** Immobilizes sperm in the fastest time recognized under the Brown and Gamble technique
- 2** Occludes the cervix for as long as 10 hours—**effective barrier action**
- 3** Nonirritating and nontoxic—**safe for continued use**
- 4** Crystal clear, nonstaining, delicately fragrant—**esthetically agreeable**
- 5** Will not liquefy at body temperature—**not excessively lubricating**



**FOR ECONOMY TO YOUR PATIENTS  
SPECIFY THE LARGE FIVE-OUNCE SIZE**



*gynecological division*

**JULIUS SCHMID, INC.**

423 West 55th St., New York 19, N. Y.

**quality first since 1883**

\*Active Ingredients: Dodecoethyleneglycol  
Monolaurate 5%; Boric Acid 1%; Alcohol 5%.

## COMMERCIAL ANNOUNCEMENT

**FOR SALE:** Office equipment and x-ray. All in perfect operating condition; much of it new; some unused. Latest style. One-third to one-half off regular price. Phone or write C. E. Gilliland, M.D., 5609 Cleveland Ave., St. Louis, Mo. Mohawk 5225.

**FOR SALE:** Large amount of office equipment of the late Dr. R. H. Parker. Terms. Call or write Mrs. Edith M. Parker, Hunnewell, Mo.

### THE STOKES SANITARIUM

923 Cherokee Road,  
Louisville, Kentucky

Our **ALCOHOLIC** treatment destroys the craving, restores the appetite and sleep, and rebuilds the physical and nervous condition of the patient. Liquors withdrawn gradually; no limit on the amount necessary to prevent or relieve delirium.

**MENTAL** patients have every comfort that their home affords.

The **DRUG** treatment is one of gradual Reduction. It relieves the constipation, restores the appetite and sleep; withdrawal pains are absent. No Hyoscine or rapid withdrawal methods used.

**NERVOUS** patients are accepted by us for observation and diagnosis as well as treatment.

E. W. STOKES, Medical Director. Established 1904  
Telephone—Highland 2101

Hair Permanently Removed by Electrolysis

**DOROTHY WORRELL, R.N.**

233 Vandeventer, St. Louis

Telephone, Jefferson 9436

Work Done on Prescription of Physicians Only

## Cook County Graduate School of Medicine

### Announces Continuous Courses

**SURGERY**—Intensive Course in Surgical Technique,

Two Weeks, starting October 24, November 28.

Surgical Technique, Surgical Anatomy and Clinical Surgery, Four Weeks, starting October 10, November 7.

Surgery of Colon and Rectum, One Week, starting October 10, November 28.

Esophageal Surgery, One Week, starting October 10.

Breast and Thyroid Surgery, One Week, starting October 10.

Thoracic Surgery, One Week, starting October 3.

Fractures and Traumatic Surgery, Two Weeks, starting October 3.

**GYNECOLOGY**—Intensive Course, Two Weeks, starting October 24.

Vaginal Approach to Pelvic Surgery, One Week, starting November 7.

**OBSTETRICS**—Intensive Course, Two Weeks, starting November 7.

**MEDICINE**—Intensive General Course, Two Weeks, starting October 3.

Gastroenterology, Two Weeks, starting October 24.

Gastroscopy, Two Weeks, starting October 24.

**DERMATOLOGY**—Formal Course, Two Weeks, starting October 24. Informal Clinical Course every two weeks.

**ROENTGENOLOGY**—Diagnostic and Lecture Course First Monday of every month.

Clinical Course Third Monday of every month.

X-Ray Therapy every two weeks.

**CYSTOSCOPY**—Ten Day Practical Course every two weeks.

GENERAL, INTENSIVE AND SPECIAL COURSES IN ALL BRANCHES OF MEDICINE, SURGERY AND THE SPECIALTIES.

Teaching Faculty—Attending Staff, Cook County Hospital Registrar, 427 South Honore St., Chicago 12, Ill.



## COMPLETE Brace & Truss SERVICE

Complete line of braces and trusses—braces fitted by certified Orthodist—certified truss fitter, graduate of Cincinnati Truss School—lady attendant—individual and personal attention.

**HANGER** ARTIFICIAL LIMBS

1912-14 OLIVE STREET  
ST. LOUIS 3, MO.



A complete line for clinical laboratories devoted to all branches of chemistry, bacteriology, hematology, and parasitology. Tested and checked in our own clinical laboratories. Purity warranted. Our facilities assure prompt shipment of large or small orders. Inquiries invited.

### COMPLETE CATALOG

Reagents catalogued alphabetically—also according to subjects and techniques, plus medical reference guide. Catalog comprises full line blood testing sera including anti-Rh, anti-M and anti-N; also reagents for Wassermann, Kline, and Kahn tests. Write for your copy. FREE ON REQUEST.

and Medical  
Reference  
Guide



**GRADWOHL**  
LABORATORIES

R. B. H. Gradwohl, M. D., Director  
3514 Lucas Av. St. Louis, Mo.



# long lines of black ants



*Long lines of black ants* attracted to madhumeha, "honey urine," led the ancient Hindu wise men to observe and recognize diabetic urine, which they described as "astringent, sweet, white and sharp." Avid insects became an acknowledged means of diagnosis. Almost equally primitive methods of urine-sugar detection remained in effect for a score or more of centuries, until modern copper reduction tests were perfected, refined and simplified.



Simplest of all today is the reliable *Ames* tablet method, performed in a matter of seconds. Urine-sugar levels are determined by direct, easily-learned steps. The use of *Clinitest* (Brand) reagent tablets has eliminated the inconvenience of external heating. Interpretation of routine urine-sugar testing follows readily from color scale comparison.

CLINITEST, trade mark reg. U.S. and Canada

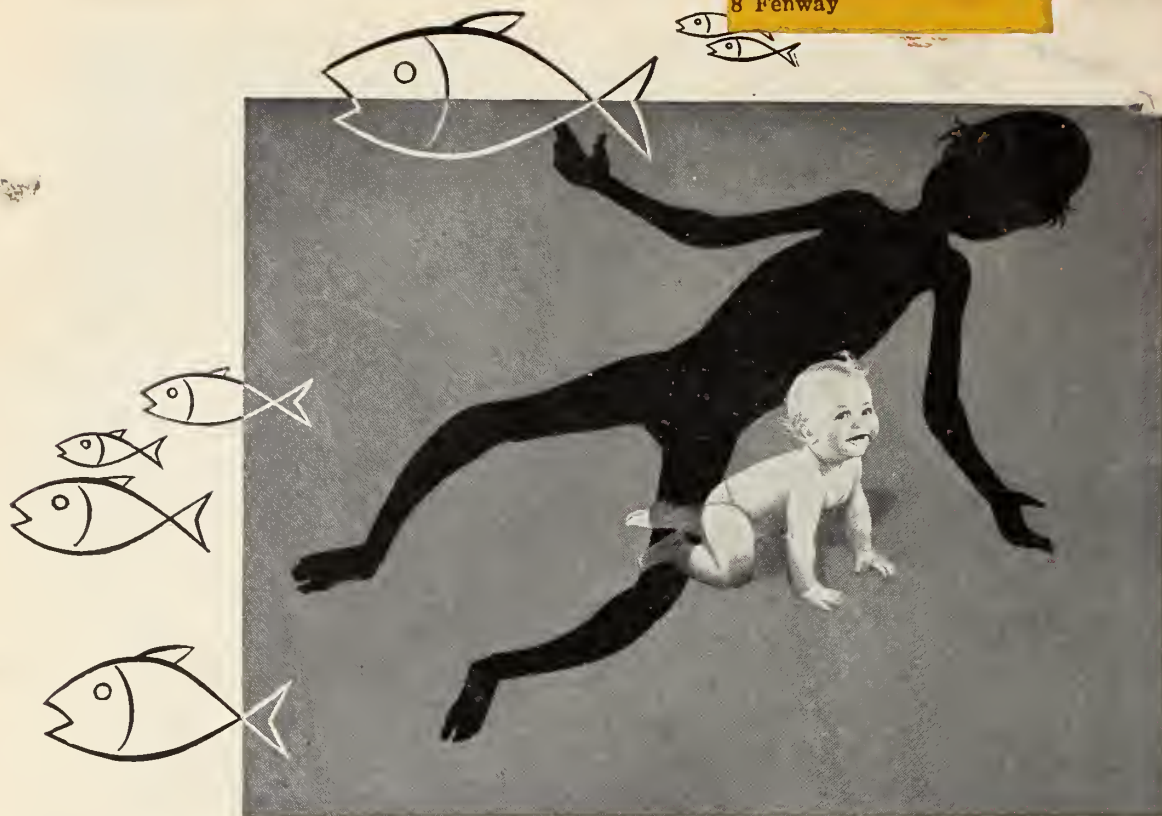
*centuries to perfect  
seconds to perform*



# Clinitest<sup>®</sup>

*for urine-sugar analysis*

AMES COMPANY, INC. • ELKHART, INDIANA



## Supplements the sun... *removes the shadow of RICKETS*

Rickets may be found in apparently healthy and well nourished infants due to an insufficient intake of vitamin D plus inadequate exposure to ultraviolet rays.

It is now generally accepted that a vitamin D supplement should be given regularly not only to infants but to older children and adolescents. Mead's Oleum Percomorphum With Other Fish Liver Oils and Viosterol is useful for this purpose.

### Mead's Oleum Percomorphum

1. Is a highly potent† source of natural vitamins A and D.
2. May be given in drop doses that are easily administered and well tolerated, and is supplied in capsule form also.
3. Has a background of sixteen years of successful clinical use.

†Potency: 60,000 U.S.P. units of vitamin A and 8500 U.S.P. units of vitamin D per gram. Each drop supplies 1250 units of vitamin A and 180 units of vitamin D; each capsule, 5000 units of vitamin A and 700 units of vitamin D.

Supplied in 10 cc. and 50 cc. bottles; and in bottles of 50 and 250 capsules.





# THE JOURNAL

of the  
MISSOURI STATE MEDICAL ASSOCIATION

VOLUME 46  
NUMBER 11

NOVEMBER, 1949

SINGLE COPY, 40 CENTS  
PER YEAR, \$3.00

## ORIGINAL ARTICLES

The Problem of Lung Cancer

Clinical Experiences With the Diagnosis of Asthma

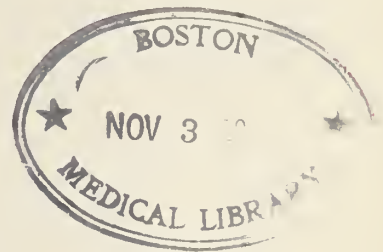
Diseases of the Newborn

Rhinoplasty

Dermatitis Due to Bal (2, 3—dithiopropanol)

St. Louis Diabetes Detection Drive

The Physician and the Law



## EDITORIALS

Color Television to Be Feature of 100th Anniversary


Session of the Association

Iodine and Nutrition

Handbook Roster

(Contents Index Page 753)

100TH ANNIVERSARY, MARCH 26-29, 1950



A "superior" compound  
among the nearly  
1000 antilueticics studied by  
Ehrlich,<sup>1</sup> an  
antispirochetal agent  
distinguished by  
more than a decade of  
clinical successes,  
the trivalent arsenoxide  
MAPHARSEN is an arsenical of  
choice in the  
treatment of syphilis.

# MAPHARSEN

an  
arsenical of  
choice  
in the treatment  
of  
syphilis

PARKE, DAVIS & CO.



The antiluetic structure of  
MAPHARSEN symbolizes  
consistently *high therapeutic efficacy*  
and consistently *low relative*  
*toxicity*, as attested  
by more than two hundred million  
injections and extensive  
serological follow-ups. MAPHARSEN  
is valuable, either alone or  
with penicillin, in syphilotherapy schedules  
of all three familiar types—  
intensive, intermediate, prolonged.

MAPHARSEN (oxophenarsine hydrochloride, P. D. & Co.)  
is supplied in single dose ampoules of  
0.04 Gm. and 0.06 Gm., boxes of 10; and in multiple  
dose ampoules of 0.06 Gm. in boxes of 10.

Krantz, J. C., Jr., and Carr, C. J.:

Pharmacologic Principles of Medical Practice,  
Williams & Wilkins Co.,  
Baltimore, 1949, pps. 114-119.

COMPANY DETROIT 32, MICHIGAN





## YOUR COSMETIC BUDGET

During the course of the year you spend a certain sum of money for beauty preparations. This sum of money represents your Cosmetic Budget. As with all budgets, it can be spent intelligently or squandered aimlessly.

Regardless of economic trends, it is always wise to give careful consideration to the act of buying.

We suggest it is both economical and more effective to buy a well-balanced cosmetic service composed of preparations selected with regard to your particular requirements and preferences, and that you will therefore welcome the services of the Cosmetic Consultants who distribute our preparations in your community.

### Luzier's Fine Cosmetics and Perfumes Are Distributed in Missouri by:

#### Chilcutt and Chilcutt, Divisional Distributors

Box 774, Jefferson City, Missouri

#### DISTRIBUTORS

**Fern Claxton**  
Rock Village Courts  
Springfield, Mo.

**Bonnie Fox**  
722 S. Jefferson  
Springfield, Mo.

**Elva Gones**  
305½ W. 4th  
Hannibal, Mo.

**Verna Bell Prophet**  
338 Landers Bldg.  
Springfield, Mo.

**Ellou Hurst**  
Box 194  
St. Charles, Mo.

**Pearl Jackson**  
510 Woodlawn  
Mexico, Mo.

**Lois Matheny**  
Box 71  
Stockton, Mo.

#### Glenna Sanders, Divisional Distributor

4944 Murdock St.

Phone Plateau 4442

St. Louis, Mo.

#### Alpha Eade, Divisional Distributor

705 Olive Street, Room 511

Phone GA 5347

St. Louis 1, Missouri

#### DISTRIBUTORS

**Mrs. Betty H. Crain**  
5367 Gladstone  
Normandy 21, Mo.  
Phone GO 6714

**Laura B. Roberson**  
3412 Humphrey  
St. Louis 18, Mo.  
Phone LA 1833

**Rose Miller**  
1121 Fullerton Bldg.  
122 N. 7th St.  
St. Louis 1, Mo.  
Phone GA 5335

**Mrs. Dorothy Miller Rasche**  
215 So. Taylor  
St. Louis 10, Mo.



## CONTENTS

The Problem of Lung Cancer. Francis M. Woods, M.D., Boston, Massachusetts .....	765	Editorials—	
Clinical Experiences With the Diagnosis of Asthma. Charles H. Eyermann, M.D., St. Louis, Mo. ....	767	Color Television to Be Feature of 100th Anniversary Session of the Association .....	792
Diseases of the Newborn. J. Milton Singleton, M.D., and Floyd C. Atwell, M.D., Kansas City, Mo. ....	770	Iodine and Nutrition .....	792
Rhinoplasty, Its Relation to Deviation of the Nasal Septum. William A. Marmor, M.D., St. Louis, Mo. ....	773	Handbook Roster .....	792
Dermatitis Due to Bal (2, 3—dithiopropanol). Paul O. Hagemann, M.D., and James W. Bagby, M.D., St. Louis, Mo. ....	775	News Notes .....	793
St. Louis Diabetes Detection Drive. Cyril M. MacBryde, M.D., St. Louis, Mo. ....	776	Musings of the Field Secretary .....	793
The Physician and the Law. Robert A. Moore, M.D., St. Louis, Mo. ....	779	Organization Activities .....	794
		Miscellany .....	798
		Tuberculosis Abstracts .....	800
		Society Proceedings .....	803
		Book Reviews .....	803
		Commercial Announcements .....	818

Entered as Second Class Matter, February 18, 1925, at the Post Office at Fulton, Mo., under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1003, Act of October 3, 1917, authorized July 30, 1918. Business Office, 1201-5 Bluff St., Fulton, Mo., and 623 Missouri Building, St. Louis, Mo., Editorial Office, 623 Missouri Building, St. Louis, Mo. Return postage guaranteed. Printed by The Ovid Bell Press, Inc., Fulton, Mo.

# THE MAJOR CLINIC ASSOCIATION

3100 Euclid Avenue, Kansas City, Missouri

A Well  
Equipped  
Institution  
for the  
Treatment of  
Nervous and  
Mental  
Diseases and  
Alcohol  
Drug and  
Tobacco  
Addictions



Beautiful  
Location  
Large, Well  
Shaded  
Grounds,  
Spacious  
Porches,  
All Modern  
Methods for  
Restoring  
Patients to a  
Normal  
Condition

HERMON S. MAJOR, M.D.  
Medical Director

HERMON S. MAJOR, JR.  
Business Manager

**AMERICAN MEDICAL ASSOCIATION**

President, Ernest Edward Irons, Chicago.  
President-Elect, Elmer L. Henderson, Louisville.

Interim Session, Washington, D. C.,  
December 6-9, 1949

**MISSOURI STATE MEDICAL ASSOCIATION**

92nd Annual Session, St. Louis, March 26-29, 1950

President, Wallis Smith, Springfield.  
President-Elect, W. A. Bloom, Fayette.  
Vice Presidents, J. C. Creech, Troy; E. J. McIntire, Carthage;  
H. M. Henrickson, Poplar Bluff.  
Speaker, F. T. H'Doubler, Springfield; Vice Speaker, Victor E. Scherman, St. Louis.  
Treasurer, C. E. Hyndman, St. Louis.  
Secretary, H. E. Petersen, St. Joseph.  
Editor, R. O. Muether, St. Louis.  
Secretary-Editor, Emeritus, R. L. Thompson, St. Louis.  
Field Secretary, Raymond McIntyre, St. Louis.  
Assistant Editor-Business Manager, Helen Penn, St. Louis.  
Executive Secretary, Tom R. O'Brien, 623 Missouri Bldg., St. Louis.

**Delegates to the American Medical Association**

R. E. Schlueter, St. Louis, 1949-51; alternate, F. G. Pernoud, St. Louis. James R. McVay, Kansas City, 1949-1951; alternate, R. B. Wray, Nevada. W. L. Allee, Eldon, 1948-50; alternate, Paul Baldwin, Kennett. Howard B. Goodrich, Hannibal, 1948-1950.

**Standing Committees**

**Scientific Work**—A. N. Arneson, St. Louis, Chairman (1951); Victor B. Buhler, Kansas City (1952); H. E. Petersen, St. Joseph.

**Postgraduate Course**—M. Pinson Neal, Columbia, Chairman (1952); Carl R. Ferris, Kansas City (1952); Raymond O. Muether, St. Louis (1951); Edward Massie, St. Louis (1951); Guy D. Callaway, Springfield (1950). **Associate Members**—W. W. Tillman, Bolivar; Kenneth Glover, Mount Vernon; Paul O. Hagemann, St. Louis; D. L. Sexton, St. Louis.

**Publication**—R. O. Muether, St. Louis, Chairman; V. T. Williams, Kansas City; H. E. Petersen, St. Joseph; M. D. Overholser, Columbia; Paul O. Hagemann, St. Louis.

**Public Policy and Public Relations**—Armand D. Fries, St. Louis, Chairman (1952); J. W. Allee, Columbia (1950); F. R. Crouch, Farmington (1951); Howard B. Goodrich, Hannibal (1951); John Growdon, Kansas City (1950). **Associate Member**—Cyril W. Schumacher, St. Louis.

**Defense**—Charles E. Hyndman, St. Louis, Chairman (1951); Roland S. Kieffer, St. Louis (1950); L. F. Heimbarger, Springfield (1950); O. B. Zeinert, St. Louis (1952); L. P. Forgrave (1952).

**Medical Education and Hospitals**—John S. Knight, Kansas City, Chairman (1951); F. T. H'Doubler, Springfield (1950); O. J. Gibson, Cape Girardeau (1952); D. M. Dowell, Chillicothe (1950); Oliver Abel, St. Louis (1952).

**Cancer**—E. C. Ernst, St. Louis, Chairman (1950); E. Kip Robinson, Kansas City (1951); Everett Sugarbaker, Jefferson City (1951); William E. Leighton, St. Louis (1952); Marvin Napper, Springfield (1952).

**Medical Economics**—Carl F. Vohs, St. Louis, Chairman (1950); Morris S. Harless, Kansas City (1951); C. T. Herbert, Cape Girardeau (1951); G. A. Aiken, Marshall (1952); A. P. Rowlette, Moberly (1952).

**Mental Health**—E. F. Hoctor, Farmington, Chairman (1951); Paul Hines, St. Louis (1950); Orr Mullinax, Jefferson City (1950); B. Landis Elliott, Kansas City (1952); Frank M. Grogan, St. Louis (1952).

**Maternal Welfare**—E. Lee Dorsett, St. Louis, Chairman (1952); Leo Hartnett, St. Louis (1952); J. L. Johnston, Springfield (1951); E. E. Wadlow, St. Joseph (1950); J. Milton Singleton, Kansas City (1950).

**Infant Care**—G. V. Herrman, Kansas City, Chairman (1951); Eugene Schwartz, Springfield (1951); H. E. Petersen, St. Joseph (1950); Peter G. Danis, St. Louis (1952); Park J. White, St. Louis (1952). **Associate Members**—Joseph C. Jaudon, St. Louis; Daniel B. Landau, Hannibal.

**Health and Public Instruction (McAlester Foundation)**—A. W. McAlester, III, Kansas City, Chairman (1950); M. K. Underwood, Rolla (1951); B. E. DeTar, Joplin (1951); Joseph Conrad, Chillicothe (1950); J. Earl Smith, St. Louis (1952).

**Constitution and By-Laws**—B. Landis Elliott, Kansas City, Chairman (1950); J. H. Summers, Lebanon (1951); John J. Hammond, St. Louis (1950); W. Logan Allee, Eldon (1952); H. O. Loyd, Jefferson City (1952).

Year indicates expiration of term.

**Fractures**—Daniel L. Yancey, Springfield, Chairman (1952); W. J. Stewart, Columbia (1951); N. S. Pickard, Kansas City (1951); W. R. Bohne, St. Louis (1950); J. Albert Key, St. Louis (1950). **Associate Members**—Jacob Kulowski, St. Joseph; B. L. Murphy, Hannibal.

**Conservation of Eyesight**—C. Souter Smith, Springfield, Chairman (1952); Robert Mattis, St. Louis (1951); A. N. Lemoine, Kansas City (1950); C. P. Dyer, St. Louis (1950); Robert S. Minton, St. Joseph (1952). **Associate Members**—Winfred L. Post, Joplin; Philip Luedde, St. Louis; John McLeod, Kansas City; G. J. Tygett, Cape Girardeau; S. L. Freeman, Kirksville; H. B. Stauffer, Jefferson City; E. D. Tenaglia, St. Louis.

**Control of Venereal Disease**—A. W. Neilson, St. Louis, Chairman (1952); W. S. Sewell, Springfield (1951); Charles Greenberg, St. Joseph (1950); Hugh L. Dwyer, Kansas City (1950); E. M. Cannon, St. Louis (1952).

**Industrial Health**—V. T. Williams, Kansas City, Chairman (1951); Horace F. Flanders, Kansas City (1951); E. M. Fessenden, St. Louis (1950); A. M. Ziegler, Kansas City (1952); R. A. Sutter, St. Louis (1952). **Associate Members**—R. Emmet Kelly, St. Louis; H. M. Roebber, Bonne Terre.

**Special Committees**

**Physical Medicine**—F. Garrett Pipkin, Kansas City, Chairman (1951); Emmett Settle, Rock Port (1950); Luke A. Knese, St. Louis (1950); A. J. Kotkis, St. Louis (1952); J. L. Washburn, Versailles (1952).

**Tuberculosis**—E. E. Glenn, Springfield, Chairman; Lawrence E. Wood, Kansas City; J. L. Mudd, St. Louis; Paul Murphy, St. Louis; C. A. Brashear, Mount Vernon; W. P. McDonald, St. Joseph; I. J. Flance, St. Louis; Florence E. MacInnis, Kansas City.

**Study of Cardiac Diseases**—A. Graham Asher, Kansas City, Chairman (1952); Drew Luten, St. Louis (1951); A. M. Estes, Jackson (1951); Julius Jensen, St. Louis (1950); Glenn W. Hendren, Liberty (1952). **Associate Members**—Horace W. Carle, St. Joseph; J. W. Fleming, Moberly; C. B. Davis, Nevada; Arthur Strauss, St. Louis; William I. Park, Springfield.

**Rural Medical Service**—R. W. Kennedy, Marshall, Chairman; A. E. Spelman, Smithville; J. W. Well, Palmyra; Martin M. Hart, Salem; R. B. Wray, Nevada.

**COUNCILOR DISTRICTS AND COUNTIES IN EACH DISTRICT\***

J. W. THOMPSON, St. Louis, Chairman

E. C. BOHRER, West Plains, Vice Chairman

**First District:** Councilor, Donald M. Dowell, Chillicothe. Counties: Andrew, Atchison, Buchanan, Caldwell, Carroll, Clay, Clinton, Daviess, De Kalb, Gentry, Grundy, Harrison, Holt, Livingston, Mercer, Nodaway, Platte, Ray, Worth.

**Second District:** Councilor, W. F. Francka, Hannibal. Counties: Adair, Chariton, Clark, Knox, Lewis, Linn, Macon, Marion, Monroe, Pike, Putnam, Ralls, Randolph, Schuyler, Scotland, Shelby, Sullivan.

**Third District:** Councilor, J. William Thompson, St. Louis; St. Louis City.

**Fourth District:** Councilor, Otto W. Koch, Clayton. Counties: Franklin, Jefferson, Lincoln, St. Charles, St. Louis County, Warren.

**Fifth District:** Councilor, J. F. Jolley, Mexico. Counties: Audrain, Boone, Callaway, Camden, Cole, Cooper, Gasconade, Howard, Maries, Miller, Moniteau, Montgomery, Morgan, Osage.

**Sixth District:** Councilor, R. W. Kennedy, Marshall. Counties: Bates, Benton, Cass, Cedar, Henry, Johnson, Lafayette, Pettis, St. Clair, Saline, Vernon.

**Seventh District:** Councilor, Edgar C. Virden, Kansas City. County: Jackson.

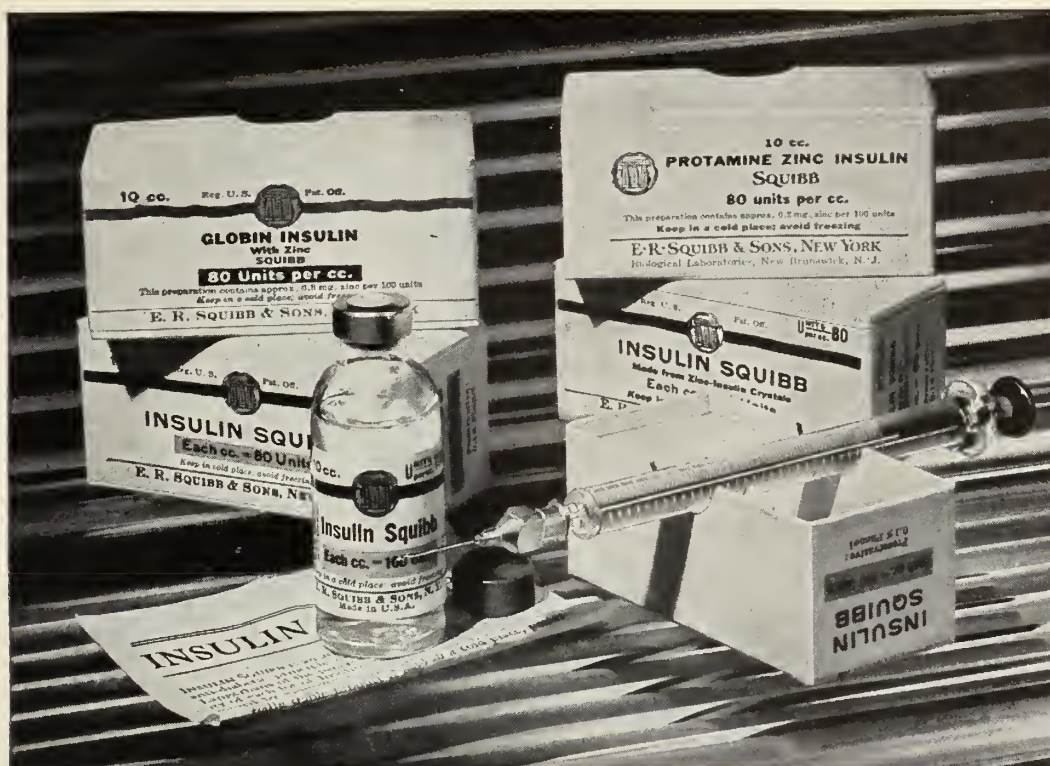
**Eighth District:** Councilor, W. S. Sewell, Springfield. Counties: Barry, Barton, Christian, Dade, Dallas, Greene, Hickory, Jasper, Lawrence, McDonald, Newton, Polk, Stone, Taney, Webster.

**Ninth District:** Councilor, E. Claude Bohrer, West Plains. Counties: Carter, Crawford, Dent, Douglas, Howell, Laclede, Oregon, Ozark, Phelps, Pulaski, Ripley, Shannon, Texas, Wright.

**Tenth District:** Councilor, Frank W. Hall, Cape Girardeau. Counties: Bollinger, Butler, Cape Girardeau, Dunklin, Iron, Madison, Mississippi, New Madrid, Pemiscott, Perry, Reynolds, St. Francois, Ste. Genevieve, Scott, Stoddard, Washington, Wayne.

Counties in italics are not organized.





## SQUIBB INSULIN PRODUCTS

*...purified...potent...rigidly standardized to meet the various requirements of diabetics.*

*short action:* peak effect within 3 to 4 hours, waning rapidly

INSULIN SQUIBB

10-cc. vials (40, 80 & 100 units per cc.)

INSULIN MADE FROM ZINC-INSULIN  
CRYSTALS SQUIBB

10-cc. vials (40 & 80 units per cc.)

*intermediate action:* peak effect in 8 to 12 hours, with action continuing  
sometimes for 16 or more hours.

GLOBIN INSULIN WITH ZINC SQUIBB

10-cc. vials (40 & 80 units per cc.)

*prolonged action:* onset slow; peak effect in 10 to 12 hours, with action  
sometimes persisting for 24 or more hours.

PROTAMINE ZINC INSULIN SQUIBB

10-cc. vials (40 & 80 units per cc.)

**SQUIBB** MANUFACTURING CHEMISTS TO THE MEDICAL PROFESSION SINCE 1858

# County Societies in Affiliation with the Missouri State Medical Association

COUNTY	DISTRICT	PRESIDENT	ADDRESS	SECRETARY	ADDRESS
Andrew	1	V. R. Wilson	Rosendale	M. L. Holliday	Fillmore
Audrain	5	Glen P. Kallenbach	Mexico	Fred Griffin	Mexico
Barton Dade	8	Rudolf Knapp	Golden City	Vern T. Bickel	Lamar
Bates	6	C. J. Allen	Rich Hill	John M. Cooper	Butler
Benton	6	T. S. Reser	Cole Camp	James A. Logan	Warsaw
Boone	5	James Baker	Columbia	Helen Yeager	Columbia
Buchanan	1	O. Earl Whitsell	St. Joseph	Joseph L. Fisher	St. Joseph
Butler	10	Frank E. Dinelli	Poplar Bluff	J. W. McPheeters, Jr.	Poplar Bluff
Caldwell-Livingston	1	Virgil D. Vandiver	Chillicothe	Charles M. Grace	Chillicothe
Callaway	5	R. B. Price	Fulton	R. N. Crews	Fulton
Camden	5	E. G. Claiborne	Camdenton	G. T. Myers	Macks Creek
Cape Girardeau	10	O. J. Gibson	Cape Girardeau	Charles F. Wilson	Cape Girardeau
Carroll	1	J. Morris Atwood	Carrollton	John H. Platz	Carrollton
Carter-Shannon	9	Harry Rollins	Winona	W. T. Eudy	Eminence
Cass	6	Herbert A. Tracy	Belton	O. B. Barger	Harrisonville
Charlton-Macon-Monroe-Randolph	2	D. E. Eggleston	Macon	Henry K. Baker	Moberly
Clay	1	W. H. Goodson	Liberty	S. R. McCracken	Excelsior Springs
Clinton	1	Ronald E. Wilbur	Cameron	F. A. Santner	Lathrop
Cole	5	H. M. Wiley	Jefferson City	J. Paul Leslie	Jefferson City
Cooper	5			J. C. Tincher	Boonville
Dallas-Hickory-Polk	8	C. H. Barnett	Bolivar	John R. O'Brien	Bolivar
De Kalb	1			W. S. Gale	Osborn
Dunklin	10	Quinton Tarver	Kennett	E. L. Spence	Kennett
Franklin	4	Herbert H. Schmidt	Marthasville	F. G. Mays	Washington
Greene	8	Daniel L. Yancey	Springfield	Kenneth E. Knabb	Springfield
Grundy-Daviess	1	Joseph M. Quisito	Trenton	E. A. Duffy	Trenton
Harrison	1	Merriam Gearhart	Bethany	W. A. Broyles	Bethany
Henry	6	S. B. Hughes	Clinton	R. S. Hollingsworth	Clinton
Holt	1	F. E. Hogan	Mound City	D. C. Perry	Mound City
Howard	5	Morris Leech	Fayette	Francis D. Dean	Fayette
Jackson	7	Carl R. Ferris	Kansas City	Kenneth E. Cox	Kansas City
Jasper	8	George H. Wood	Carthage	E. H. Hamilton	Joplin
Jefferson	4	Robert H. Donnell	Crystal City	George Hopson	DeSoto
Johnson	6	O. H. Damron	Warrensburg	Reed T. Maxson	Warrensburg
Laclede	9	H. W. Carrington	Lebanon	B. B. Hurst	Lebanon
Lafayette	6	Douglas Kelling	Waverly	Jordan Kelling	Waverly
Lewis-Clark-Scotland	2	J. R. Bridges	Kahoka	P. W. Jennings	Canton
Lincoln	4	H. S. Harris	Troy	J. C. Creech	Troy
Linn	2	Roy R. Haley	Brookfield	J. R. Dixon	Brookfield
Marion-Ralls	2	H. L. Greene	Hannibal	M. J. Roller	Hannibal
Mercer	1	T. S. Duff	Cainsville	J. M. Perry	Princeton
Miller	5			Carl T. Buehler, Jr.	Eldon
Mississippi	10	G. W. Whitaker	East Prairie	E. C. Rolwing	Charleston
Moniteau	5	K. S. Latham	California	L. L. Latham	California
Montgomery	5	E. J. T. Anderson	Montgomery City	S. J. Byland	Wellsville
Morgan	5	A. J. Gunn	Versailles	J. L. Washburn	Versailles
New Madrid	10	L. J. Smith	New Madrid	H. W. Carter	Portageville
Newton	8	H. C. Lentz	Neosho	J. A. Guthrie	Neosho
Nodaway-Atchison-Gentry-Worth	1	Frank H. Rose	Albany	Charles D. Humbert	Barnard
North Central Counties Medical Society (Adair-Schuyler-Knox-Sullivan-Putnam)	2	Spencer L. Freeman	Kirksville	John B. Jones	Kirksville
Ozarks Medical Society (Barry-Lawrence-Stone-Christian-Taney)	8	Fred Wommack	Crane	Kenneth Glover	Mt. Vernon
Pemiscot	10	E. L. Taylor	Steele	C. F. Cain	Caruthersville
Perry	10	J. J. Bredall	Perryville	L. W. Feltz	Perryville
Pettis	6	E. L. Rhodes	Sedalia	Carl D. Siegel	Sedalia
Phelps-Crawford-Dent-Pulaski	9	A. A. Drake	Rolla	M. K. Underwood	Rolla
Pike	2	Eugene Barrymore	Bowling Green	Charles H. Lewellen	Louisiana
Platte	1	L. C. Calvert	Weston	H. Graham Parker	Platte City
Ray	1	L. D. Greene	Richmond		
St. Charles	4	J. M. Jenkins	St. Charles	Calvin Clay	St. Charles
St. Francois-Iron-Madison-Washington-Reynolds	10	George L. Watkins	Farmington	Marvin T. Haw, Jr.	Bonne Terre
Ste. Genevieve	10	A. E. Sexauer	Ste. Genevieve	R. W. Lanning	Ste. Genevieve
St. Louis City	3	J. W. Thompson	St. Louis	S. J. Merenda	St. Louis
St. Louis	4	Paul R. Whitener	St. Louis	Robert C. Kingsland	St. Louis
Saline	6	James A. Reid	Marshall	Charles A. Veatch	Marshall
Scott	10	W. C. Critchlow	Sikeston	W. J. Ferguson	Sikeston
Shelby	2	D. L. Harlan	Clarence		
South Central Counties Medical Societies (Howell-Oregon-Texas-Wright-Douglas)	9	Garrett S. Hogg, Jr.	Cabool	A. C. Ames	Mountain Grove
Stoddard	10	H. A. Harris	Bloomfield	W. C. Dieckman	Dexter
Vernon-Cedar	6	William H. Allen	Nevada	Rolla B. Wray	Nevada
Webster	8	C. R. Macdonnell	Marshfield	E. G. Beers	Seymour





# Dorsey

*going your way*

FOLLOWING a parallel route to a similar destination, the ethical pharmaceutical maker necessarily keeps the progress and direction of scientific medicine constantly in view.

For a closer look at medicine's progress and full comprehension of its implications, the Smith-Dorsey Company has expanded its research facilities, secured increased research grants and added research personnel.



MANUFACTURERS OF  
AQUEOUS SUSPENSION OF ESTROGENIC SUBSTANCES • DORSEY  
AMINOPHYLLINE SUPPOSITORIES • DORSEY



**THE SMITH-DORSEY COMPANY • Lincoln, Nebraska**

BRANCHES AT LOS ANGELES AND DALLAS

## **Dependable Self-Retention with the Gilbert-Graves Vaginal Speculum**

*Patent Pending*

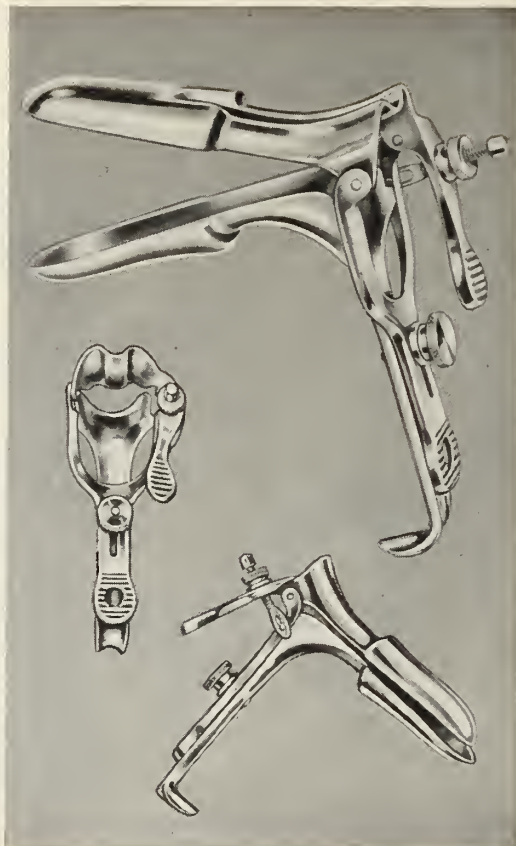
This new design enlists the aid of the anatomical structures about the vagina to insure positive retention. Basically similar in construction to the familiar Graves speculum, this modification differs sharply in actual use. When the structures are in moderate tone, the speculum cannot fall out of position during the course of examination. There is a channel on the proximal half of the upper blade, designed to receive and protect the urethra and at the same time permit the upper flange to impinge against the symphysis pubis. The flange on the lower blade rests securely against the perineal structures within. Any increased tone or muscular contraction cannot tend to extrude the speculum; on the contrary, the speculum is held more firmly in position by constrictive force. The physician's hands are therefore completely free; no assistant is needed. This size is particularly suitable for married and parous patients.

JD4842—Gilbert-Graves Vaginal Speculum, self-retaining, medium size, stainless steel, each.....\$9.75



**a. s. aloe company**

General Offices: 1831 Olive Street • St. Louis 3, Mo.



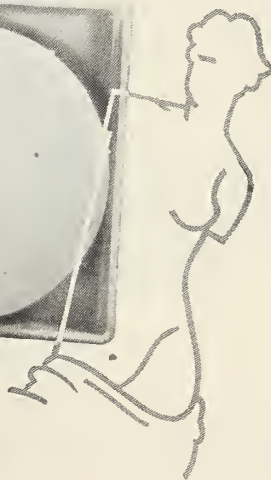
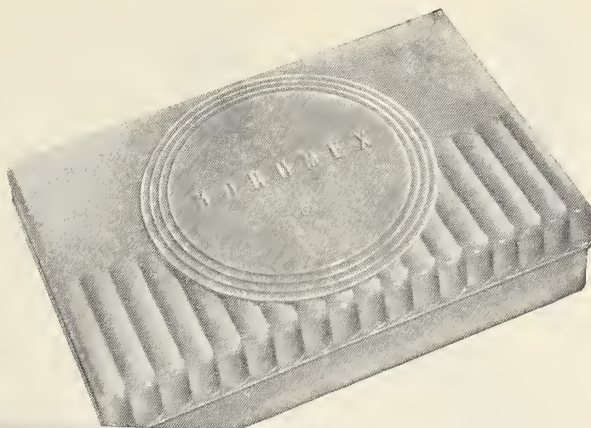
## **THE WALLACE SANITARIUM**

MEMPHIS, TENNESSEE

*For the Diagnosis and Treatment of  
Nervous and Mental Diseases, Drug Addiction and Alcoholism*



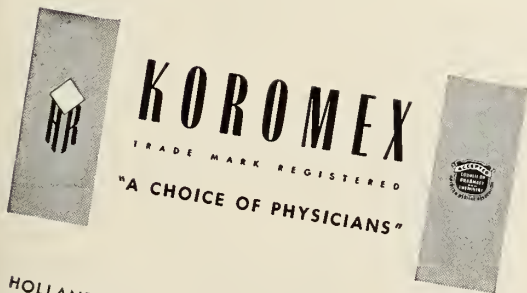
INTRODUCING...



## THE KOROMEX JELLY REFILLABLE UNIT

Physicians acclaim the new Koromex all inclusive contraceptive unit. This fine container is ivory-colored plastic, permanent, dust-proof, attractive for home use and ideal for traveling. It contains two regular size tubes of Koromex Jelly which rest in individual compartments... a Koromex Diaphragm stored in the ingeniously constructed cover compartment... and a Koromex Measured Dose Plunger Applicator that rests securely on its own rack.

Where pregnancy is contra-indicated, recommend the complete Koromex Jelly Refillable Unit to your discriminating women patients. For those of your patients who require a slightly less lubricating but equally effective spermicidal preparation, a similar companion package containing two tubes of Koromex Cream instead of Koromex Jelly is also available.



HOLLAND-RANTOS COMPANY, INC., 145 HUDSON STREET, NEW YORK 13, N. Y.  
MERLE L. YOUNGS • PRESIDENT

ACTIVE INGREDIENTS: BORIC ACID 2.0% OXYQUINOLIN BENZOATE 0.02% AND PHENYLMERCURIC ACETATE 0.02%, IN SUITABLE JELLY OR CREAM BASES.

## THIS BEAM OF LIGHT Shows What Rexair Can Do



Next time you house-clean, pause a moment by a sunlit window. You will see thousands of dust motes floating in the beam.

Light does not produce this dust. It is everywhere in the air you breathe. Conventional methods of cleaning often fail to eliminate it, by letting dust filter back into the air you breathe.

Wouldn't you like to clean *clean*? Wouldn't you like to know that the dust you remove from floors, carpets and furniture is eliminated from your house forever? You can—with Rexair.

Rexair has no bag. It uses a pan of water to trap dust and dirt. Wet dust cannot fly, and dust cannot escape from Rexair's water bath. You pour the water down the drain, and pour the dirt away with it.

**REXAIR DIVISION, MARTIN-PARRY CORP.**

**BOX 964, TOLEDO, OHIO, DEPT N-119**

**FREE BOOK**—Send for this colorful, illustrated 12-page book. Shows how Rexair does all your cleaning jobs, and even "washes" the air you breathe. Ask for all the copies you can use. No obligation.

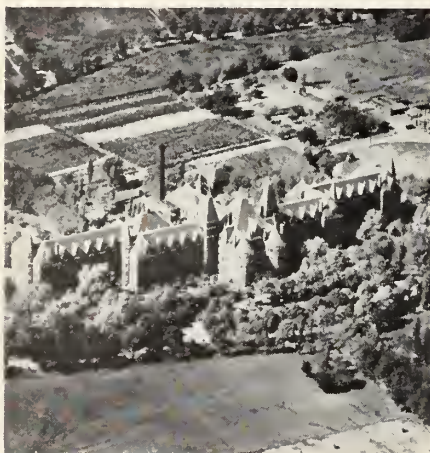


# Rexair

## ST. VINCENT'S SANITARIUM

7300 St. Charles Rock Road—St. Louis (14), Missouri

General Hospital Facilities; Complete, modern, approved by A.M.A. and A.C.S.



Conducted by  
**DAUGHTERS OF  
CHARITY OF ST.  
VINCENT DePAUL**

Moderate Rates

Located on 300 acres, much of which is landscaped and equipped for physical therapy. Homelike, pleasant atmosphere. Golf and tennis courts. Regulation motion pictures in auditorium. Television sets in recreation rooms.

### MEDICAL STAFF

Fifteen qualified neuropsychiatrists. (Each patient under care own psychiatrist.)

### CONSULTING STAFF

Full consulting staff.

### SPECIAL DEPARTMENTS

All modern therapies available, including **PSYCHOSURGERY**. Occupational and recreational therapies.

Affiliate School of Nursing.

Musical therapy by means of intercommunications systems. Patients whose condition permits are taken to Art museums, zoos, Municipal Opera, symphonies, sports events and other therapeutic activities.

**ACCOMMODATIONS:** Private Rooms. Private Rooms with Bath.  
Adequate classification facilities according to type and severity of illness.  
Acute ill reside and receive treatments in air-conditioned units.

Correspondence Invited

Constructive Cases Preferred

Sister Administrator



# THROAT SPECIALISTS REPORT ON 30-DAY TEST OF CAMEL SMOKERS —

**"Not one single case of throat  
irritation *due to smoking* CAMELS!"**



**Y**ES, these were the findings in a total of 2,470 weekly examinations of hundreds of men and women from coast-to-coast who smoked only Camels for 30 consecutive days! And the smokers in this test averaged one to two packages of Camels a day!



*According to a Nationwide survey:*

**MORE DOCTORS  
SMOKE CAMELS**  
*than any other cigarette!*

Doctors smoke for pleasure, too! When three leading independent research organizations asked 113,597 doctors what cigarette they smoked, the brand named most was Camel!

R. J. Reynolds Tobacco Co., Winston-Salem, N. C.

# 50 and 2

## YEARS TREATING ALCOHOL AND DRUG ADDICTION

In 1897 Doctor B. B. Ralph developed methods of treating alcohol and narcotic addiction that, by the standards of the time, were conspicuous for success.

Twenty-five years ago experience had bettered the methods. Today with the advantages of collateral medicine, treatment is markedly further improved.

The Ralph Sanitarium provides personalized care in a quiet, homelike atmosphere. Dietetics, hydrotherapy and massage speed physical and emotional re-education. Co-operation with referring physicians. Write or phone.

*The*  
**RALPH**  
**SANITARIUM**  
*Established 1897*

Ralph Emerson Duncan, M.D.  
DIRECTOR

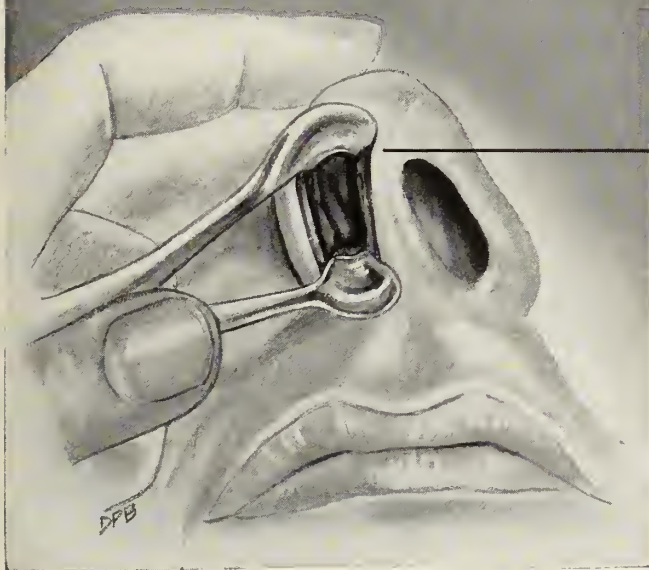


**529 HIGHLAND AVENUE • KANSAS CITY 6, MISSOURI**

Telephone Vltor 3624

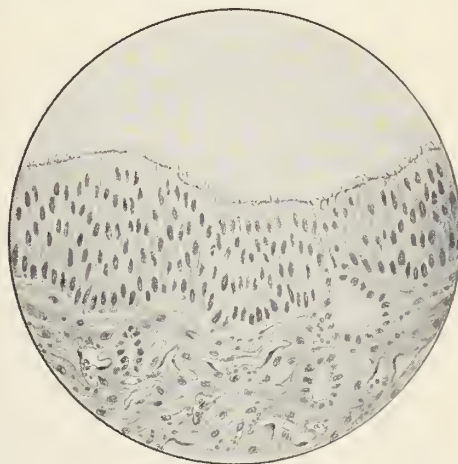


promotes  
aeration . . . free drainage  
in colds  
. . . sinusitis



Nasal membrane showing increased leukocytes with denudation of cilia.

Normal appearing nasal epithelium.



Nasal engorgement and hypersecretion accompanying the common cold and sinusitis are quickly relieved by the vasoconstrictive action of

## NEO-SYNEPHRINE®

HYDROCHLORIDE

Brand of Phenylephrine Hydrochloride

The decongestive action of several drops in each nostril usually extends over two to four hours. The effect is undiminished after repeated use.

Relatively nonirritating . . . Virtually no central stimulation.

Supplied in ¼% solution (plain and aromatic), 1 oz. bottles. Also 1% solution (when greater concentration is required), 1 oz. bottles, and ½% water soluble jelly, ⅝ oz. tubes.

*Winthrop-Stearns* INC.  
NEW YORK 13, N. Y. WINDSOR, ONT.



Neo-Synephrine, trademark reg. U. S. & Canada

# Zemmer

## PHARMACEUTICALS

A complete line of laboratory  
controlled ethical pharmaceuticals.  
*Chemists to the Medical Profession for 44 years.*  
Mo. 11-49 *The Zemmer Company*  
Oakland Station • PITTSBURGH 13, PA.



### In Cheilitis from LIPSTICK

Introctable exfoliative lip dermatoses may often be traced to eosin lipstick dyes. Remove the offending irritants, and the symptoms often disappear. In lipstick hypersensitivity, prescribe AR-EX NON-PERMANENT LIPSTICK—so cosmetically desirable, yet free from all known irritants. Send for Free Formulory.



PRESCRIBE



AR-EX

NON-PERMANENT  
LIPSTICK



AR-EX COSMETICS, INC. 1036 W. VAN BUREN ST. CHICAGO 7, ILL.

## RADIUM (including Radium Applicators) FOR ALL MEDICAL PURPOSES

Est. 1919

### QUINCY X-RAY & RADIUM LABORATORIES

(owned and directed by a Physician-Radiologist)

W. C. U. Bldg.

HAROLD SWANBERG, B.S., M.D., Director

QUINCY, ILLINOIS

## HAMILTON-SCHMIDT SURGICAL COMPANY

St. Louis, Missouri

⌈ Surgical Instruments, Invalid and Sick Room Supplies ⌋  
⌈ Post-Operative Belts, Elastic Hosiery and Trusses Fitted ⌋

CEntral 1680

REGISTERED NURSE IN ATTENDANCE 215 North Tenth Street

# for Fifty Years

## PROFESSIONAL PROTECTION EXCLUSIVELY

THE  
**MEDICAL PROTECTIVE COMPANY**  
FORT WAYNE, INDIANA

ST. LOUIS Office: A. W. Breckenkamp, Representative, 623 Missouri Theatre Building, Telephone Newstead 0404



# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies  
Issued Monthly under direction of the Publication Committee

COPYRIGHTED, 1949, BY MISSOURI STATE MEDICAL ASSOCIATION. ALL RIGHTS RESERVED.

VOLUME 46

NOVEMBER, 1949

NUMBER 11

R. O. MUETHER, M.D., Editor  
HELEN PENN, Assistant Editor  
623 Missouri Bldg., St. Louis, Mo. Telephone, Newstead 0404-05

PUBLICATION  
COMMITTEE { R. O. MUETHER, M.D., Chairman  
V. T. WILLIAMS, M.D.  
H. E. PETERSEN, M.D.  
PAUL O. HAGEMANN, M.D.  
M. D. OVERHOLSER, M.D.

### THE PROBLEM OF LUNG CANCER

FRANCIS M. WOODS, M.D., *Boston, Massachusetts*

IT IS PERHAPS presumptuous of me to talk on the subject of lung cancer in the state in which Dr. Evarts Graham did the first successful pneumonectomy for cancer of the lung.<sup>1</sup> However, he would be the first to emphasize the importance of reporting experience with significant series of cases for he recognized early that primary cancer of the lung is first or second among malignant diseases in the male.

I wish to present some of the significant facts gleaned from a recent analysis of all the cases of primary carcinoma of the lung seen by a thoracic surgical group composed at present of Dr. Richard H. Overholt, Dr. Norman J. Wilson and me. There have been 603 such patients from 1932 through 1948. Of these 315 were already inoperable because of associated diseases or obvious extension beyond the lung by the time they were referred for surgical therapy. Of the remaining 288, 126 were found incurable and unresectable at the time of exploration. Thus, of the original 604 referred for surgical therapy only 162 were resectable and could be offered any significant hope of cure.

This experience is unfortunately the rule and not the exception. Does the fault lie with the patient or does it lie with the general practitioner or internist who sees the patient first? Does it lie with the roentgenologist to whom the patient is referred for diagnosis? Or does it lie with the surgeon?

The average length of time after the onset of

symptoms was three months before the patient sought the advice of his doctor. This improved little in the years 1947 and 1948. Can one blame the patient for disregarding cough, blood-streaked sputum, slight weight loss or chest pain? Clearly some improvement can be made by education of the patient.

What about the doctor who first sees the patient? On the average the patient was under his care three months before an x-ray was ordered. I am glad to say that in the last two years this has improved to less than two months. All too often cough was treated symptomatically; a diagnosis of simple pneumonia, unresolved pneumonia or virus pneumonia was made and no x-ray taken or no consideration given to the possibility of underlying carcinoma. Definite progress has been made but clearly more can be made by being constantly alert, especially in males more than 40 years of age. Four out of five carcinomas of the lung are in males and 85 per cent in the age group of 40 to 70 years.

What about the roentgenologist? Here again a delay occurs. The average time between the first x-ray and the establishment of the diagnosis was six months. An improvement of almost two months has occurred in the last two years. It would be unfair to blame this period of delay on the roentgenologist for usually the delay represents a failure of team work. Physicians have learned to recognize as probable carcinoma the classical x-ray picture; massive atelectasis of a lobe or an entire lung or a large irregular rounded density. It is in the small area of atelectasis in one of the pulmonary segments or subsegments or the small peripheral density that there is failure to consider the possibility of tumor. It may be an area of incomplete atelecta-

\*From the Department of Surgery, Tufts College Medical School; Member of Staff New England Deaconess Hospital, Pratt Diagnostic Hospital, Boston, Mass.

Presented at the 91st Annual Session, Missouri State Medical Association, Kansas City, March 27-30, 1949.

1. Graham, E. A., and Singer, J. J.: Successful Removal of an Entire Lung for Carcinoma of Bronchus, J. A. M. A. 101:371, 1933.

sis or an area of pneumonitis large or small that should excite suspicion.

If suspicion is aroused let it be followed by action and not be a period of watchful waiting; the expression on the x-ray report, "Advise re-examination in two months," appears with painful frequency in the early medical record of these people. The wait and see attitude leads to disastrous delay.

Surgical extirpation of the disease by pneumonectomy, or in selected cases by lobectomy, offers the only hope at present of cure for primary lung cancers. Competent thoracic surgeons are now available in every part of the country. Any possibility of a diagnosis of lung cancer should lead immediately to appropriate investigation. First, of course, chest x-rays should be studied. Next comes bronchoscopic study. Remember that the bronchoscopist can only see the main bronchi. Usually if he can see an endobronchial tumor it is an indication of an advanced lesion that has extended from its original site. The earlier the diagnosis the less the chance of a positive bronchoscopic biopsy. Secretions aspirated through the bronchoscope and sputum may now be studied for tumor cells. In the hands of a trained technician a positive diagnosis is reliable but failure to find tumor cells is of no significance. Experience of the group being reported is comparable to that of others: of sixty-one positive diagnoses of tumor cells in sputum or secretions obtained through the bronchoscope only four proved incorrect; and two of these false positives were obtained on the first day of the technician's experience. On the other hand, in only 52 per cent of 110 cases of carcinoma was a diagnosis made in this way. Lipiodol injection of the bronchial tree is rarely warranted. Even if an obstructed bronchus is demonstrated, the cause cannot be identified.

Careful consideration, of course, must be given to other diagnoses like tuberculosis, lung abscess and bronchiectasis. However, failure to establish a definite diagnosis in such patients should lead to exploration of the chest unless clearly contraindicated by poor general condition or associated disease. An exact diagnosis can be made and appropriate therapy carried out. Exploratory thoracotomy carries no significant mortality.

The records shows that only eleven of 273 patients seen more than five years ago are alive today. However, analysis demonstrates clearly that increased effort will be rewarded for of forty-one patients seen in time for resection five or more years ago, ten are still alive, a five year cure rate in this group of almost 25 per cent. So far, in undifferentiated carcinoma, carcinoma simplex and adenocarcinoma we can report no five year cures. However, after resection in epidermoid carcinoma Grade I, 40 per cent are alive after five years; in Grade II, 50 per cent, and in Grade III, 50 per cent.

The importance of early diagnosis is emphasized by an analysis of the resections according to ex-

tent of the disease. Among these tumors resected in the face of gross extension outside the lung only one has survived more than one year and none as long as five years. Among those who had no gross extension but who had extension to lymph nodes found microscopically, 20 per cent are still alive after five years. Where no extension was found, either grossly or microscopically, 40 per cent are still alive after five years. It is evident that a program designed to find patients before extension has occurred will bear good fruit.

Thus it is apparent that the medical profession is salvaging but a poor percentage of the people afflicted with lung cancer. The patient is slow to seek advice; the doctor is slow to suspect the diagnosis; the roentgenologist does not have sufficient clinical information to make the diagnosis; and the surgeon is salvaging a significant proportion of but one group. Education of the patient, increased awareness by the doctor, alertness of the roentgenologist and improved surgical techniques are all bearing fruit.

These things are of the utmost importance but greater hope lies in another direction. It has been shown that early diagnosis and early treatment are the key to successful treatment of cancer. The thorax is the one part of the body readily accessible to inexpensive mass x-ray surveys. These surveys are already in process and already bearing fruit in finding incipient and asymptomatic tuberculosis. With proper emphasis there is every reason to believe that much lung cancer can be found in the incipient and asymptomatic stage. The burden of spotting the suspicious cases will fall on the roentgenologist. No new criteria will be available but he must learn to alert himself to even the smallest rounded densities or areas of atelectasis or pneumonitis noted. Within a few days by proper team play with the patient's doctor and neighboring specialists, other diagnostic investigations should be in process. A majority of the sputum studies for tumor cells and bronchoscopic examinations will give negative findings. Usually studies for evidence of tuberculosis will be in order. More and more patients are being referred to the thoracic specialist for diagnosis after such routine studies fail to explain definitely the undiagnosed asymptomatic x-ray lesion.

In this situation chest exploration is in order. Again, the practice of waiting a few weeks or months to see if the lesion is progressive is mentioned only to condemn it. A slow growing tumor may show no change and a fast growing tumor may get out of control. There is but little relationship between size of tumors and numbers of metastases. At the time of exploration a lesion superficial in the lung can be biopsied, a quick frozen section microscopic examination made and decision about resection made. Benign tumors and inflammatory processes may be excised. I prefer to remove such diseased areas with as little lung tissue as possible.



Detailed studies of pulmonary anatomy have revealed that the lobes of the lung are themselves made up of segments each with its own bronchus and blood supply. These can be resected individually or in groups leaving all possible normal lung tissue intact and functioning. However, if a diagnosis of cancer is made, total pneumonectomy is carried out with resection of the mediastinal lymph glands. This procedure offers a maximum chance of removing all the cancer cells that may have lodged in lymphatic channels outside the main tumor.

Not infrequently at exploration it is found that the tumor or undiagnosed lesion is deep within lung tissue and cannot be biopsied readily. In this instance the involved lung segment or segments are resected first; a quick microscopic examination is made. If the lesion turns out to be non-malignant it has been excised and no further treatment is necessary and the operation is terminated by closing the chest wall. If the lesion is found to be malignant, the pneumonectomy is completed by removing the remaining lung and mediastinal lymph glands.

#### SUMMARY

An experience with 603 cases of primary lung

cancer has been presented. The record appears discouraging, but improvement is popular education, earlier x-ray examination on the part of the doctor and increased alertness of the roentgenologist have already led to earlier diagnosis. An analysis of the results suggests that earlier diagnosis will inevitably bring a significant percentage of cures. It is pointed out that mass chest x-ray surveys can be utilized to diagnose many pulmonary carcinomas in the asymptomatic phase. If any doubt exists, exploration of the chest is indicated to establish the diagnosis. The wait and see attitude is an omen of disaster.

1101 Beacon Street.

In the identical period of the study presented (1932-1948), twenty-seven patients were treated by pulmonary resections for tumors diagnosed as bronchial adenoma, infiltrative bronchial adenoma or malignant adenoma. Some authors consider these tumors to be primary carcinomas (adenocarcinoma, Grade I) and include them in their cancer statistics. From a clinical point of view, they should receive special consideration. For example, twenty-six of twenty-seven patients have been followed recently, and there has been only one late death. This patient died of metastasis which had similar characteristics to the bronchial tumor. One patient has not been followed. Ten of the remaining twenty-five patients have lived from five to fifteen and one-half years after operation. In the adenoma series, there were no operative deaths; therefore, since immediate and late results are so totally different in the so-called adenoma group, they have not been included in this paper on true cancer of the lung.

## CLINICAL EXPERIENCES WITH THE DIAGNOSIS OF ASTHMA

CHARLES H. EYERMANN, M.D., *St. Louis*

ASTHMA MEANS gasping or panting and, in ancient times, entered medical usage to denote breathlessness or dyspnea without reference to a disease entity, with the pathogenesis purely philosophic or speculative. Eventually a spasmodic element was noted and then it acquired the connotation of paroxysm. It became a disease entity in the later 1600's and in the attempt to make presumptive etiologic or anatomic diagnoses there followed, for example, asthma humidum, asthma plethoricum, asthma abdominale and many others of similar descriptive nature; and in more modern times, cardiac, renal, uremic, thymic, winter, bronchial and nasal asthma. With the advent of anaphylaxis and later allergy, with their implication of an underlying immunologic mechanism as the cause of breathlessness, a new nomenclature came into existence based on the reaction of the human organism to substances originating either within or without the body. According to different points of view, extrinsic and intrinsic, atopic and nonatopic, allergic and nonallergic, infectious and noninfectious, endogenic and exogenic asthma were added.

These new terms, however, did not abolish the common usage of the word "asthma" without descriptive adjective and the tendency still remains

to use asthma indiscriminately as a diagnosis for any respiratory discomfort with wheezy breathing.

The natural evolution of knowledge and the technical advances in the methods of diagnosis have disentangled the causes of the wheezy breathing so that many diseased states with wheezy breathing have become identified and differentiated as clinical entities and bronchial asthma has emerged as a disease with particular symptoms, characteristic signs and distinctive pathology.

Since asthma is the symptom of many diseases and force of usage compels one to retain it as a symptom diagnosis, one should view it in the light of advancing medical knowledge. I have found the following scheme useful in making the etiologic diagnosis:

#### I. ASTHMA: PRIMARILY DEPENDANT UPON IMMUNOLOGIC MECHANISMS.

- (A) Reaginic—Characterized by:
  - Reagins in the Blood
  - Positive Cutaneous Reactions
  - An Inheritance Factor
  - Eosinophilia
  - Early Age of Onset
- (B) NonReaginic—Has all the clinical criteria for allergic asthma without cutaneous reactions or demonstrable reagins and usually an age of onset in the fourth or later decades:
  - 1. Infection—Bacterial Allergy?
  - 2. Periarthritis Nodosa
    - (a) Status is not certain. May occur as a reaginic reaction, but more frequently in nonreaginic situations

From the Department of Medicine, Washington University School of Medicine, the Washington University Clinics, the St. Louis Children's Hospital, and the Barnes Hospital, St. Louis.

These clinical situations are allergic bronchial asthma.

## II. ASTHMA: PRIMARILY DEPENDANT UPON ORGANIC PATHOLOGY.

Pulmonary Emphysema  
Bronchitis: Acute and Chronic  
(some instances may come under B)  
Bronchiectasis  
Pulmonary and Bronchial Tumours  
Mediastinal Tumours  
Cardiovascular Renal Disease  
Foreign Bodies in the Tracheobronchial System  
Obesity

These are common examples; there are many others of lesser frequency. Nonallergic asthma is a permissible term as a working diagnosis.

The following clinical experiences illustrate a few of the wide variety of clinical entities that have presented themselves with the diagnosis of asthma.

### REPORT OF CASES

Case 1. A man, aged 49 years, was referred for treatment of status asthmaticus which consisted of cough and wheezing for three weeks, uninfluenced by the usual medications. This cough began after choking while eating soup; it was paroxysmal at first, while presently it was practically continuous; it was not productive. The past history revealed that since childhood unpleasant odors induced vomiting and he believed now that they induce chest oppression and wheezy breathing. The first severe wheezing dyspnea had occurred fifteen years earlier, following the unwitting inhalation of sulphur dioxide. Wheezing with moderate exertion has been present since, which was more of a discomfort than a disability. There were no other allergic manifestations in him or in his antecedents.

The physical examination suggested obstruction of the left main bronchus. The x-ray examination of the chest suggested obstruction of the left lower lobe bronchus; at bronchoscopy a spicule of bone was removed just below the left upper bronchus. There has been no incapacitating wheezy breathing during a follow up of eight years.

Case 2. A 40 year old woman had been treated for asthma for five years. Her symptoms consisted of wheezy breathing with recumbency at night and more pronounced during damp weather. There were no other suggestive personal allergic manifestations and no such manifestations in her antecedents.

The essentials of the physical examination were the typical myxedema facies, tongue, skin and speech. The basal metabolic rate was minus 29. Cutaneous tests with allergen were negative.

The "asthma" disappeared with the administration of thyroid extract.

Case 3. A 5 months old infant boy was referred with a diagnosis of asthma for allergic study. The mother gave a long complicated history of intermittent wheezy breathing, skin rashes, unexplained fever and diarrhea. All these symptoms were said to be due to an allergen which appeared to vary from time to time; however, she was certain that the ingestion of orange juice and Pabulum induced a febrile reaction, that milk induced a rash, and various unknown inhalants, the wheezy breathing. Indeed, there was such certainty about the latter that the father had to change his clothes before visiting his son in the nursery.

This complex clinical situation was studied with a pediatrician in the St. Louis Children's Hospital. There were no allergic manifestations in the antecedents.

The essentials on physical examination were infected adenoids and tonsils. Hospital observation determined

that the noisy breathing diagnosed as bronchial asthma was snoring due to the adenoidal obstruction; the rash was the normal erythema of the head with the exertion of crying, and the fever was due to the adenoidal and tonsillar infection.

Deliberate feedings of Pabulum, of orange juice and of milk did not induce the described symptoms. There was no diarrhea while in the hospital on a diet used for a 5 months old infant.

Case 4. A lad of 12 years was referred for allergic study because the usual treatment for asthma had not been helpful. The history was that of wheezy breathing for six months, to which an unproductive cough was added in the latter three of these. He had no other allergic manifestations nor were they present in the antecedents.

The essentials on physical examination were broadened sternal dullness, the cardiac apex in the fifth interspace in the posterior axillary line and short inspiratory and expiratory wheezing diffusely distributed over the thoracic cage.

The x-ray examination of the chest showed a large shadow in the anterior mediastinum.

The presumptive diagnosis was lymphosarcoma.

Case 5. This 56 year old man was referred with the diagnosis of asthma. He had been well until "he caught cold," which consisted of fever, cough, wheezy breathing and blood streaked sputum, five months previously. At that time asthma was diagnosed. He now remembered that he had spat up a small quantity of blood without associated symptoms nine months previously. Neither he nor his antecedents had symptoms suggestive of allergic manifestations.

The essentials on physical examination were dullness and tubular breathing in the left upper anterior and posterior chest.

X-ray of the chest showed infiltration of the left upper lung with deviation of the trachea to the left and exploratory thoracotomy showed an inoperable carcinoma of the lung.

Case 6. This case illustrates the difficulties in diagnosis that arise when the clinical course mimics the allergic one. A female infant, aged 3 months, who lived on a farm, entered the St. Louis Children's Hospital because of wheezy breathing of seven weeks duration. There was no history of allergic manifestations in the antecedents.

The essentials of the physical examination were the inspiratory and expiratory wheezy breathing. With some observers the expiratory phase was accentuated, with others both phases were of equal intensity. There was a blood eosinophilia of 8 per cent. Laryngoscopy revealed a normal larynx. The x-ray examination of the chest disclosed moderate enlargement of the thymus. The respiratory discomfort was relieved by adrenalin. X-ray therapy was given for the large thymic shadow and she became symptom-free in two weeks.

Most of those who observed her considered the diagnosis to be allergic bronchial asthma and that the enlargement of the thymus was incidental.

She was sent home to a feather-wool-free environment. After leaving the hospital the first few days were spent in the town close to their farm and she was without respiratory discomfort. Wheezy breathing recurred twenty-four hours after going to the farm home and became of such severity that she reentered the hospital one week after her discharge. At that time, again, the essentials on physical examination were inspiratory and expiratory wheezing of equal intensity. Some observers thought there was a suggestion of stridor



to the breath sounds. There were no eosinophils in the nasal secretion or sputum, but the blood eosinophilia varied from 7 to 13 per cent; passive transfer tests were negative. Several laryngoscopic examinations showed a normal larynx. Finally, bronchoscopic examination disclosed a hemangioma just below the vocal cords occupying one half of the trachea. This disappeared with the implantation of radon seeds.

There has been no return of the wheezy breathing in the farm environment during a follow up of three years. Of interest is the blood eosinophilia of 7 to 13 per cent when the tumour was present and a range of 2 to 3 per cent after it was removed.

Case 7. A woman, aged 48 years, had complained of asthma for the last eight months. Upon analysis this consisted of cough which, when prolonged, became associated with noisy breathing. The clinical history also disclosed that menstruation had ceased two years previously, that there were frequent "hot flashes" and that she was more nervous and irritable.

She did not stem from antecedents with allergic manifestations. The only personal allergic manifestation was a dermatitis limited to the area of the thigh which was exposed to the metal of her stocking supporters.

The physical examination was within normal limits. There was no wheezy breathing. During the examination there was a frequently repeated unproductive cough which impressed one as habit cough. Cutaneous tests with allergen were negative.

There has been no wheezy breathing, even during respiratory infections, while receiving treatment for menopausal syndrome.

Case 8. A 45 year old woman was referred for study of asthma which she had had for one year. The asthma consisted of an inability to take a deep breath, a tightness in the throat and a substernal oppression. Additionally, she had been irritable and nervous for one year and the menses had been irregularly present. There were no allergic manifestations in the antecedents or in herself.

Except for an increase of seventeen pounds in weight over the estimated normal for her height and age, the physical examination was within normal limits.

The diagnosis was sighing dyspnea, obesity and early menopausal syndrome.

She became asymptomatic on a reduction diet and small doses of estrogens.

Case 9. A 70 year old woman was referred with the diagnosis of asthma. The first episode began eight years previously after a Thanksgiving dinner, with cough and a tight feeling in the chest and breathlessness and in an atmosphere filled with tobacco smoke. Since then similar episodes occurred about every two months lasting about two weeks, with the severer ones during the winter time. The odors or smoke of frying foods and heavy concentration of tobacco smoke are the only agents to her knowledge which induce coughing which, if prolonged sufficiently, has associated wheezy breathing and chest oppression. Her mother had similar symptoms a few years before her death at 89 years. Neither she nor her antecedents had suggestive allergic manifestations.

The essential findings on physical examination were obesity and senile emphysema with high pitched, short inspiratory and expiratory wheezing diffusely distributed over the chest cage. No positive cutaneous reactions were obtained to the statistically significant allergen.

There has been no asthma since the effects of a reduction diet have been obtained. Curiously, the odors of

frying food and tobacco smoke are less irritable than formerly.

Case 10. A white man, aged 42 years, had paroxysmal cough with wheezy breathing for ten years, particularly during the winter. He had nasal polyps, the removal of which the first time was followed by less cough, but their removal the second time was followed by no change in the symptomatology. He did not stem from allergic antecedents nor did he have any other personal manifestations of allergy. No positive cutaneous reactions were obtained to the statistically significant allergen.

The essential on physical examination was obesity.

No wheezy breathing has been present since his weight has been brought to the estimated normal for his height and age. He has been observed for the last six years.

Case 11. A man, aged 61 years, was referred for study with the diagnosis of asthma, which he had had for four years. The analysis of his symptomatology disclosed that it consisted of nonseasonal exertional dyspnea, worse during the winter time when it was associated with wheezing breathing. There were no allergic manifestations in his antecedents or in himself. No positive cutaneous reactions were obtained to the statistically significant allergen.

The essential findings on physical examination were overweight and inspiratory rhonchi at the lung bases.

His discomfort disappeared on a reduction diet and has remained so during several years subsequent observations.

Case 12. A white man, aged 50 years, treated for asthma for eight years, which consisted of periods of incapacitating wheezy breathing and also continuous, but not incapacitating, exertional wheezy breathing.

The dietary analysis disclosed an excessive intake of beer, wheatstuff and sugar. He slept in a feather bed and had a house dog.

He had no other suggestive allergic manifestations nor did any of his twelve children. He did not stem from antecedents with allergic manifestations.

The essentials on physical examination were overweight, pulmonary emphysema and short inspiratory and expiratory wheezing diffusely distributed over the chest cage.

No positive cutaneous reactions were obtained to allergen.

The wheezy dyspnea disappeared when the effects of a reduction diet were obtained, without getting rid of the feather bed or the dog.

These cases have been reported briefly to serve as patterns for some of the clinical entities mistakenly called asthma. Characteristically, none of these patients have the criteria of allergic individuals. They are examples of wheezy dyspnea due to primary organic pathologic conditions and should be designated by their respective diagnoses and not asthma. The term "nonallergic asthma," however, would be permissible to serve as a working diagnosis. In my experience, pulmonary emphysema with chronic bronchitis, obesity often associated with pulmonary emphysema, and the menopausal syndrome often associated with obesity, are the most frequent clinical entities that are diagnosed asthma.

The word "asthma" should be a challenge to one's diagnostic discernment. Neither wheezing

breath sounds nor dyspnea connote allergenic disease so that diagnostic proficiency requires not only a thorough knowledge of internal medicine and its diagnostic handmaiden, allergy, but also an expanding experience with the psychology of dyspneic patients. A painstaking clinical history is indispensable. It must deal with the antecedents, with the environment, with the diet and, most important of all, with the onset of early symptoms and their development into the presenting symptom, using accurate dates and accounting for the well and sick periods. The correlation of this data determines whether one is dealing with an allergic individual, whether the symptoms are typical of allergic disease and can be produced by the presently accepted concept of the immunologic mechanism of allergy, or whether one is dealing with a clinical situation that does not possess the earmarks of allergy and

is explained more readily by primary organic pathology. Such an exercise often allows a presumptive cause for the wheezy breathing or asthma and combined with the physical examination establishes a base line for the corroborative diagnostic procedures. The cause of "asthma" eludes one because one is looking for one cause. Since the mechanism of the wheezy breathing is partial bronchial obstruction which can arise from manifold and multifarious diseased states, there can be no one cause. It is not even one disease and what is needed is to think of all the possibilities.

In conclusion I would stress that the precise use of the word "asthma" would avoid a nosologic error, confusing to the medical profession and misleading to the patient, and would make for accurate diagnoses.

634 North Grand Blvd., St. Louis, Mo.

## DISEASES OF THE NEWBORN

EARLY DIAGNOSIS FROM THE OBSTETRIC VIEWPOINT

J. MILTON SINGLETON, M.D., *Kansas City*

AND

FLOYD C. ATWELL, M.D., *Kansas City*

THIS MORNING there were delivered in Missouri five small caskets for the burial of infants who died in their first month of life. In Missouri in the year 1946, 1,834 infants died before passing the first month of life, or a rate of 23.3 per 1,000.

In St. Louis, the rate in 1946 was 22.2; in Kansas City, 27.44; in St. Joseph, 29.94; in Springfield, the best, 21.28 per thousand. This compares with the rate of 24.0 per thousand for the United States in the same year.

Parmalee has said, "The drama of the adjustment to extra-uterine life can easily be lost sight of because of the very success of its accomplishment in the great majority of cases."<sup>1</sup> Thirty per cent of all deaths in the first year occur in the first twenty-four hours.<sup>2</sup>

Surely the diagnosis of and warning note about these twenty-four hour deaths rests almost completely in the hands of the obstetrician and a high percentage of those occurring within the first month are his and the pediatrician's joint responsibility. If prenatal care is to be more than a formality, prenatal diagnosis, treatment and salvage of a certain increasing percentage of these lives should be the goal of the obstetrician. He should be able, in many instances, from the information in his possession to instruct the family and the pediatrician as to what their responsibility is, and what the probable outlook may be when he discharges the infant as his particular problem.

The immediacy of the diagnosis is imperative, as

the time limitation for success or failure is brief.

The discovery and study of the Rh factor has revived the closer association of pediatrician and obstetrician. While some claim a high percentage of salvage in their Rh problems, whether the saving of life hours is on the plus or minus side would be difficult of determination at present. The closer bond so knit, however, between pediatrician and obstetrician and their united mind on many problems will achieve much in the reduction of neonatal loss.

The advances afforded by the addition of hormones in the diabetic and in the habitual aborter, and the study of fluid and chemical balance may be duplicated by the addition now of amino acids, and by vitamin K and dehydrated grasses. It is clinical observation that the administration of a high proteid diet with amino acids may supplement the increased call for proteids during rapid development of uterus, placenta and breast, resulting in better development of those structures, and so in the baby. The use of dehydrated grasses with its vitamin K and grass juice and other factors appears to provide a less irritable uterus, healthier placenta and sturdier child, even if born prematurely.

In a recent publication, Stewart Clifford, a pediatrician of Boston<sup>3</sup> states that the causes of morbidity and mortality in the newborn are few—"anoxic injuries, traumatic injuries, infections, congenital defects, and erythroblastosis." He further states that most of these conditions may be recognized in the first twenty-four to forty-eight

Presented at the 91st Annual Session, Missouri State Medical Association, Kansas City, March 27-30, 1949.



hours of life. Many of them must, of course, be anticipated and even diagnosed before birth.

The diseases toward the diagnosis of which the obstetrician should contribute may be divided roughly into two groups: Those which he is called upon to prevent or treat; and those in whose diagnosis he should assist by advising of certain conditions found in the mother's and father's histories, upon the examinations, upon the course of pregnancy, and later. We should like to consider these conditions under the groups suggested by Clifford.

The subject of prematurity, the foremost cause of infant mortality, has been covered admirably so there is need to say little on this subject. It is extremely important that the diagnosis be made early in labor and that conducted accordingly with, preferably, no sedation and the mildest of anesthesia available. The use of regional anesthesia is reported by Masters<sup>4</sup> to have reduced the mortality of premature infants by 30 per cent. It has been extremely satisfactory in the cases in which we have used it.

#### APNOEA, ANOXIA (HYPOXIA OF WATERS<sup>5</sup>) ASPHYXIA (CENTRAL AND PERIPHERAL)

The diagnosis of type and degree is exceedingly difficult, and is made only upon the examination and immediate treatment positively, intelligently and gently applied. Whether it be simple apnoea with or without obstructed passages, hypoxia or severe damaging anoxia, the early application of oxygen, coramine, adrenalin intracardiac have in our hands occasionally saved infants which we felt were beyond hope. Continued and prolonged observation alone may determine whether it is a cerebral edema or the irreversible damage of anoxia. It is our belief that analgesics and anesthesia must be used with great caution, but that so used, they are a life saving measure and shock buffer to mother and child, and that simple apnoea occurs only occasionally and rarely as a result.

#### ATELECTASIS

Atelectasis is extremely difficult of diagnosis and often can be made only by x-ray. It may be suspected when there is intermittent cyanosis and dyspnea. Whether it be physiologic or pathologic is also difficult of determination. Yandell Henderson<sup>6</sup> has recommended administration of oxygen at regular intervals for the first few days, occasionally with carbon dioxide. With the price of oxygen and gases being cheaper, this might be a good regular routine in all babies.

#### PNEUMOTHORAX OF THE NEWBORN

Considered here because of its nature and pathology rather than under injuries is spontaneous pneumothorax of the newborn. It is of two types; mild, usually unsuspected and discovered upon x-ray for suspected enlarged thymus, fracture or other pathologic condition; the severe type may be suspected when there is severe dyspnea and con-

siderable shock with rapid weak heart due to displacement and pressure upon the mediastinum. Absent breath sounds and a tympanitic note on the affected side confirm the diagnosis. The diagnosis is further confirmed by the usually dramatic relief which follows aspiration of the accumulated air.<sup>7</sup>

#### TRAUMA

*Cerebral Injury.*—It should be remembered that injury to the intracranial structures may be due to edema or anoxia as well as from laceration and hemorrhage. The diagnosis and prognosis are often difficult and uncertain. Obstructed labor, difficult and tedious manipulations or tumultuous labor leads one, of course, to suspect cerebral damage. Spasticity or flaccidity, failure or irregular response to the Moro reflex may lead to a diagnosis. Tetany of the newborn should be considered here and not confused with injury. The routine administration of vitamin K to the mother during, and to the baby, after labor should be practiced though the value of its contribution has been unconfirmed. I believe that the continuous administration of dehydrated grasses with its vitamin K, and other factors, throughout pregnancy will convey greater resistance to cerebral hemorrhage and other hemorrhagic tendencies.

Birth injuries to the spinal cord, rarer now with better understanding of technic of breech deliveries and use of after-coming head forceps, should be noted, explained and treated. The pediatrician may save friendships for the obstetrician by explanation of unsuspected fractures and muscle injuries (sterno-mastoid) evidence of which appears after the baby is at home.

*Injury to the Internal Organs.*—Injury to the internal organs, principally the liver, are rare. Diagnosis is determined upon the usual signs of profound shock, which may be delayed on account of the confinement of the hemorrhage under the capsule of the liver. Recovery is unlikely.

*Adrenal Hemorrhage.*—Adrenal hemorrhage presents a typical picture. When it is extensive, often a tumor may be palpated. Shock is profound with cyanosis and a high fever in spite of a damp, cool skin. Transfusions and injections of adrenal cortex with intravenous saline may be given.

#### INFECTIONS

*Pneumonia.*—Pneumonia may be anticipated with prolonged rupture of membranes and aspiration of infected material during a long and tedious labor. I believe the prophylactic administration of penicillin to the mother is justified, and the warning to the pediatrician to start early chemotherapy may be life saving. Food and supportive measures during such labors may be transmitted as protection to the baby and help to prevent infections and exhaustion.

*Infectious diarrhea.*—Infectious diarrhea has shown that universal hospitalization for deliveries

is not entirely an unmixed blessing. Early diagnosis and cooperation of obstetrician with pediatrician to practice every isolation measure, even to the closure of the hospital wing to stamp out the danger, is requisite. I have been accused of carrying a torch for breast feeding. I willingly accept that criticism (and woe to the pediatrician who attempts to quench it). When one reads about epidemic diarrhea of the newborn and how investigators have found gross contamination of bottles, milk supply, and personnel alike, one feels that one is justified in attempting to exploit the producer to consumer method of feeding and thus eliminate some of the middle men with their potential danger of contamination of the infants food (Hogue<sup>14</sup>). The obstetrician should start early in pregnancy to condition the mother as to her responsibility to the infant. It is in these conditions and many others of infection and inanition in which mother's milk is of such extreme importance.

*Other infections.*—Congenital syphilis, tuberculosis, sepsis of the newborn, impetigo, omphalitis, meningitis, infection of tooth buds and sinus, and salivary gland infection should be mentioned and kept in mind. Appropriate measures instituted early, and the pediatrician alerted prenatally, intranatally or immediately postnatally will greatly restrict neonatal loss in this group listed under infections.

#### INTERNAL GLANDULAR

*Diabetic.*—The diabetic mother must be recognized early and decision as to the course of treatment selected. Whether one follows the advice of White<sup>8</sup> or adheres to the ideas of Rees<sup>9</sup> in administration of estrogens and progesterone, the pediatrician must be selected and alerted and ready for action in giving supportive measures to the baby such as glucose.

*Hypothyroidism.*—The recognition of familial hypothyroidism in the mother should lead to the administration of iodine or thyroid in the anticipation of possible congenital states and infantile goiter.

#### CONGENITAL ANOMALIES

It has long been known that embryonic tissue is a good culture media for the filterable virus and the chick embryo has been used for years in experimental work with viruses. It was not, however, until 1941 when Gregg,<sup>10</sup> of Australia, presented a series of seventy-eight cases of congenital cataract, forty-four of these complicated by congenital heart disease, occurring in infants whose mothers had suffered early in pregnancy from an exanthematous disease diagnosed as German measles, that the profession became aware of the manner in which the virus might also affect the human fetus. This has been confirmed by more recent observations of Wesselhoeft.<sup>11</sup> So there seems to be no question but that the virus of German measles, at least, is capable of causing developmental defects in the human fetus, and

one may be alerted to observe results from other virus infections. It has long been my opinion that influenza, other infections, and toxic agents could damage groups of cells in early embryonic conformation. Witness the old and possibly somewhat "old wives' tale" belief that conception occurring at or immediately after an alcoholic debauch of one or both of the mates resulted in a defective child when all others in the family had been normal.

While one must be cautious in applying to man any experimental work done on animals, nevertheless, the work of Warkany et al.<sup>12</sup> and Burkes et al.<sup>13</sup> with pregnant rats fed on diets which were deficient in certain primary food substances and vitamins would indicate that dietary deficiencies are capable of causing true anomalies.

The obstetrician may be of help to the pediatrician in forewarning him and the parents of what may be expected if virus infection has occurred. Likewise, the presence of an excess of amniotic fluid or an unusually small or slowly growing uterine contour suggest occurrence of fetal anomaly of respiratory, cardiac, renal or cephalic location. Confirmed or not by x-ray, this intimation of trouble should be confided to the appropriate parent and the pediatrician, that the impact of these unpreventable neonatal losses be lightened on all concerned.

#### RH FACTOR

At the present time, the mother's Rh status is known before the time of delivery, together with her degree of sensitization in the event she is Rh negative. Availability of free laboratory service for titer and the ease of performing Rh factors should make this study and preparation universal. There should be the closest cooperation between obstetrician and pediatrician, and blood of appropriate type should be ready for immediate transfusion or replacement if deemed necessary. We know for a certainty of early diagnosis, but no infallible prognostic measure seems available in these cases. It is our belief that the only safe procedure, and the degree of titer is not a definite index, is to be ready for and, in most instances, give immediate transfusion or replacement, as a few hours delay has often resulted in the loss of the healthiest appearing infants.

#### SUMMARY

An attempt has been made to list the afflictions of the early neonatal period and discuss briefly the importance of their early diagnosis, which becomes the obligation of the obstetrician.

#### COMMENT

1. Prenatal care and study and measures of treatment have made great advances in reduction of neonatal morbidity and mortality.

2. Further cooperation of obstetrician and pediatrician and coordination of prenatal, intranatal and



neonatal thought should limit mortality of the newborn to that desirable irreducible minimum.

3. The obstetrician may save much morbidity and mortality by asking his patient to engage her pediatrician in advance and then securing his continuous interest and support.

248 Plaza Medical Building.

#### BIBLIOGRAPHY

1. Parmelee, A. H.: *The Child in Health and Disease*, Greenlee and Ely, 1948, p. 121.
2. Dunham, E. C.: Round Table Discussion on Reducing Hazards of First Two Days of Life, *J. Pediat.* **23**:471-473, 1943.
3. Clifford, S. H.: Medical Progress, Care of Newborn, *New England J. Med.* **240**:61-67 (Jan. 13) 1949.
4. Masters, W. H.: Continuous Caudal Analgesia, *Am. J. Obst. & Gynec.* **56**:756.
5. Daniels, R. A., and Cate, W. R., Jr.: Wet Lung: Experi-

mental Study Effects of Trauma Hypoxia, *Ann. Surg.* **127**:836 (May) 1948.

6. Henderson, Y., and Turner, J. M.: Artificial Respiration and Inhalation; Principles Determining the Efficiency of Vapour Methods, *J. A. M. A.* **116**:1508 (Apr. 5) 1941.

7. DeCosta, E. J.: Spontaneous Pneumothorax of the Newborn Infant, *Am. J. Obst. & Gynec.* **39**:578-592 (April) 1940.

8. White, Priscilla: Pregnancy Complicating Diabetes of More Than Twenty Years Duration, *Med. Clin. N. Am.* **31**:395-405 (March) 1947.

9. Rees, R. A.: Diabetes in Pregnancy, *Iowa M. J.* **2** (February) 1948.

10. Gregg, N. M.: Congenital Cataract Following Measles in Mother, *Trans. Ophth. Soc. Australia* **3**:35-46, 1942.

11. Wessenhoeft, C.: Rubella and Congenital Deformities, *New England J. Med.* **240**:258 (Feb. 17) 1949.

12. Warkeny, J.; Nelson, R. C., and Schaffenberger, Elizabeth: Congenital Malformation Induced in Rats by Maternal Nutritional Deficiency, *Am. J. Dis. Child.* **64**:860, 1942.

13. Burke, B. S.; Beal, J. A.; Kirkwood, S. B., and Stuart, H. C.: Nutrition Studies During Pregnancy, *Am. J. Obst. & Gynec.* **46**:38, 1943.

14. Hogue, F. S., Kansas City, Missouri: Personal Communication.

## RHINOPLASTY ITS RELATION TO DEVIATION OF THE NASAL SEPTUM

WILLIAM A. MARMOR, M.D., *St. Louis*

IN APPROXIMATELY 1907, Dr. Jacques Joseph of Berlin developed the endonasal approach to the operation known today as a "corrective rhinoplasty" and devised many of the special instruments that are still known as Joseph's plastic instruments.

Since that time, particularly in the larger surgical centers, many men have become interested in this operation and, with the better understanding that the nose is physiologically the air conditioning duct of the upper respiratory system as well as the cosmetic center of the face, it has become even more a problem for the rhinologist than for the general plastic surgeon.

Rhinologists in general freely admit that submucous resection of the nasal septum is an operation that is technically not to be underestimated and that it frequently takes the utmost care and patience to produce a nose that is anatomically and functionally satisfactory. When one is confronted with a situation in which in addition to the obstruction to breathing there is an external deviation of the nose to one or both sides, the correction of the multiple deformities assumes formidable proportions. For this reason I feel that in most cases in which there is an obstructing septum associated with an external deformity, the two stage operation is much more desirable. An attempt will be made to show how the cases are selected.

Figure 1 is a diagrammatic representation of the problem. A D B E C represents the preoperative profile view of the nose as determined for the most part by the shape of the bony and cartilagenous septum but also, of course, by the nasal bones and external cartilages of the nose. A B C represents the intended profile in so far as the septum is concerned. In those cases in which the lateral devia-

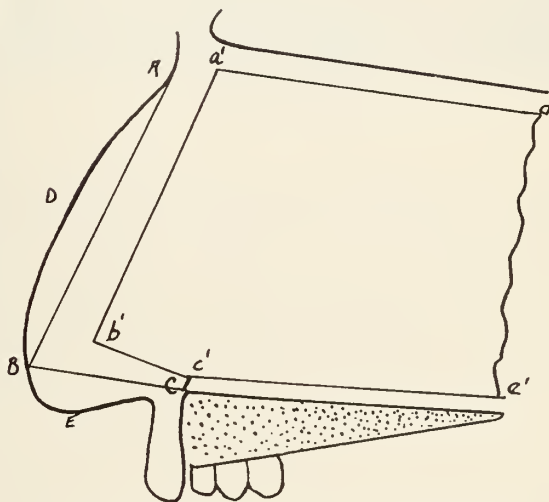


Fig. 1. Diagrammatic lateral view of nasal septum.

tion of the septum is limited to the area outlined by A D B E C c' b' a' the correction of the septal obstruction can best be done at the same time as the corrective rhinoplasty. If an appreciable part of the area outlined by a' b' c' e' d' is involved in the obstructive portion of the septum, the submucous resection of this area of the septum should be done at a preliminary operation from four to six weeks before the corrective rhinoplasty is done and particular care is taken at that time to leave a bridge from 5 to 7 mm. of cartilage in the area corresponding to A a' b' B.

This preliminary submucous resection of the nasal septum can be done leisurely under local anesthesia under optimum conditions in the hospital or rhinologist's office and entails a maximum of twenty-four hours in the hospital and little or no discomfort. No intranasal packing is required. The



Fig. 2. Case 1.

remainder of the corrective rhinoplasty is done four to six weeks later in the usual manner and at that time the anterior portion of the septum also is corrected.

Case 1, figure 2, shows lateral and anterior pre-operative and four weeks postoperative photographs of a patient with external lateral deviation of the nose complicated with posterior deviation of the nasal septum and operated on in two stages.

Case 2, figure 3, shows oblique and anterior pre-operative and four weeks postoperative photographs of a patient with an extreme external lateral deviation of the nose complicated by an ante-

rior obstructing deviation of the septum and operated on in one stage.

#### CONCLUSIONS

Corrective rhinoplasty when complicated by obstructive deviation of the nasal septum is better done in two stages, except in certain selected cases.

607 N. Grand Blvd.

#### BIBLIOGRAPHY

- Aufricht, Gustave: Development of Plastic Surgery in the U. S., Tr. Am. Soc. Plastic & Reconst. Surg. (Oct. 16) 1944.  
 Fomen, Gilbert, and Silver, Syracuse: Plastide Repair of the Obstructing Septum, Arch. Otol. 47:7-20 (January) 1948.  
 Fomon, Syracuse, and Bolotow, Pullem: Plastic Repair of the Reflected Septum, Arch. Otol. 44:141-156 (August) 1946.  
 Safian, Joseph: Corrective Rhinoplastic Surgery, Am. J. Surg. 1935.



Fig. 3. Case 2.

#### HEART INFECTION TAKES HEAVY TOLL IN DISABILITY

Despite the success doctors have achieved in curing infection of the lining of the heart by administering penicillin, patients who recover from the disease may be disabled.

One out of three patients in a group of eighteen reported in the September 10 *Journal of the American Medical Association*, were left with a progressive heart condition, although penicillin cleared up the active infection.

Subacute bacterial endocarditis, inflammation of the membrane which lines the heart, has been until recently an almost uniformly fatal disease. In a number of cases it follows rheumatic fever, the article points out.

With the advent of penicillin therapy, however, doctors have been able to cure many patients of the active

heart infection. But since the membrane which lines the heart muscle covers the valves of the heart as well as its inner walls, endocarditis may leave scars which cause narrowing of one or more valves or interfere with their proper closing.

All of the group of patients reported by Drs. Sherman R. Kaplan, Ray H. Rosenman, Louis N. Katz, and William A. Brams, of Michael Reese Hospital, Chicago, were followed from twenty-five to sixty-one months after their heart infection was cured by penicillin therapy.

Six of the patients had progressive heart disability since the onset of subacute bacterial endocarditis. In three of these the disability led to death from heart failure. Twelve showed no progression of their heart condition, the doctors say.



# Case Report

## DERMATITIS DUE TO BAL (2, 3—dithiopropanol)

A COMPLICATION IN THE TREATMENT OF GOLD DERMATITIS

PAUL O. HAGEMANN, M.D., *St. Louis*

AND

JAMES W. BAGBY, M.D., *St. Louis*

THE INTRODUCTION of BAL (2, 3—dithiopropanol) has been of considerable value in the treatment of reactions due to chrysotherapy.<sup>1</sup> Unfavorable reactions to BAL have been described<sup>2</sup> following parenteral administration: namely, nausea, headache, burning in the nose, throat and chest, and tingling and pains in the legs. These symptoms are transient following an injection and are somewhat proportional to the dosage. BAL applied locally is known to cause whealing and erythema. Sensitivity to BAL as proved by positive patch test follows the local use of BAL, especially if the skin is previously traumatized. Five of eighteen normal subjects given parenteral BAL developed positive patch tests but additional parenteral BAL failed to light up the site of the patch test.<sup>3</sup>

To our knowledge, the case to be reported is the first to develop a generalized rash due to parenteral administration of BAL.

### REPORT OF A CASE

Mrs. E. E. J., 49 years of age, had had rheumatoid arthritis for seventeen or eighteen years. Early during this period she had had many types of therapy but at no time had gold salts or vitamin D been administered.

In 1947 the patient was troubled with increasing joint disability and she reported for an examination.

On physical examination, the patient was a small moderately well nourished woman weighing 110½ pounds. She walked with ease but complained considerably about her hands. There was marked spindling of proximal interphalangeal joints and moderate swelling of the second and third metacarpophalangeal joints on each hand. The left wrist could not be extended well. Knees were painful on extremes of motion. Small joints of the foot were tender on pressure. The general examination was quite normal; nose and throat, dental, cardiac, pulmonary, abdominal and pelvic examinations were not notable.

Laboratory data included a normal blood count, urinalysis and negative S.T.S. sedimentation rate was 12.4 mm. per hour. Anterioposterior x-ray of the right foot showed no evidence of joint change. Anterioposterior x-ray of the left hand showed diffuse osteoporosis, with irregular and narrowed joint spaces in the wrist. Carpal bones were atrophied. Several proximal interphalangeal and metacarpophalangeal joint spaces showed marked narrowing.

*Course.*—The patient was given a conservative program of rest, exercise, salicylates and vitamins. After seven months of such management, she felt no better and sedimentation rate was slightly elevated. Myo-

chrysrine therapy was begun April 12, 1948, with a dose of 10 mg. intramuscularly. Twenty-five mg. doses were administered each week thereafter and the patient noted some increase in joint discomfort, slight nausea and a metallic taste in the mouth. By August 1948, the patient had received 340 mg. of the drug and seemed to be tolerating it somewhat better. There were no abnormalities noted in weekly blood counts and urinalyses and the skin remained clear. At that time the patient left for a month's vacation. While away, she gained six pounds and felt quite well. Gold therapy was resumed, one dose of 25 mg. being given.

Within a few days pruritis was noted over the dorsum of the hands and an erythematous, papular and vesicular rash appeared shortly. Within a week the rash involved periorbital areas, lips, antecubital fossae, the anterior chest, vulva and dorsum of each foot. These lesions were red, scaling, edematous, moist and intense pruritic. Antihistaminic ointments were used without relief.

Six weeks after the onset of dermatitis, the patient was admitted to a hospital for BAL therapy. During a period of twelve days she was given 29.5 cc. of BAL (10 per cent suspension in peanut oil). The rash cleared dramatically by the third day of treatment only to relapse when treatment was suspended for twenty-four hours because of unpleasant side effects (headache, leg pains and nausea) attributed to BAL. A patch test with undiluted myochrysrine (50 per mg. per cc.) solution was positive at this time. At the time of discharge, the rash was virtually symptomless and seemed to be fading rapidly.

Within twenty-four hours after discharge, the rash again became activated and symptoms recurred. Local therapy was employed at home for a period of nine days and then the patient was rehospitalized for further BAL therapy. Physical examination and laboratory data were not unusual except for the gold dermatitis and a blood eosinophilia of 8 per cent. The rash was eczematoid in type and widely distributed as noted previously. Hyperpigmentation was not present. Another antihistamine ointment in carbowax base was applied and starch and sodium bicarbonate baths were given twice daily.

Five cc. of BAL were administered during the first two hospital days and at that time vesicles appeared on the left leg, left hand and on the hard palate. These lesions were not surrounded by erythema and developed in areas that were quite free of preexisting skin lesions. This new development was interpreted as a spread of the gold dermatitis and 5 cc. of additional BAL were given during the next two days. By this time more vesicles had appeared on the elbows, and the nares, lips and palate were quite denuded as the result of ruptured confluent vesicles and bullae. The rash on the arms, trunk and legs had become fiery red and confluent in many areas. BAL was discontinued

From the Department of Medicine and the Arthritis and Dermatology Clinics, Washington University School of Medicine, St. Louis, Mo.

and within twenty-four hours the rash had begun to fade and the patient was less miserable. Blood eosinophilia of 25 per cent had developed as compared to 8 per cent at the time of admission. On supportive measures including two blood transfusions, continued and steady improvement was noted. A patch test with BAL (10 per cent in peanut oil) produced a marked erythema without vesiculation. The patient was discharged home after seventeen days and continued colloidal baths, a lanolin-cold cream ointment and vitamin therapy.

The residual evidence of gold dermatitis (antecubital and periorbital eczematoid lesions) gradually disappeared during the following two months. Some small areas of hyperpigmentation appeared on the arms at the sites of the previous eruption and these gradually faded. During the period of the gold reaction, joint symptoms were strikingly decreased.

#### SUMMARY

A patient with rheumatoid arthritis developed a gold dermatitis following the administration of 365

mg. of gold sodium thiomalate (myochrysine). This rash faded appreciably during the first course of BAL therapy only to relapse in several days. When BAL was readministered a rash due to sensitivity to BAL developed which was far more severe than the gold dermatitis. Sensitivity to myochrysine and BAL was proved by positive patch test in each instance.

3720 Washington Avenue.

#### BIBLIOGRAPHY

1. Cohen, A.; Goldman, J., and Dubbs, A. W.: The Treatment of Acute Gold and Arsenic Poisoning, *J. A. M. A.* **133**: 749 (Mar. 15) 1947.
- Ragan, C., and Boots, R. H.: The Treatment of Gold Dermatitis, *J. A. M. A.* **133**:752 (Mar. 15) 1947.
- Lockie, L. M.; Norcross, B. M., and George, C. W.: Treatment of Two Reactions Due to Gold, *J. A. M. A.* **133**:754 (Mar. 15) 1947.
- Stocken, L. A., and Thompson, R. H. S.: Reactions of British Anti-Lewisite with Arsenic and Other Metals in Living Systems, *Phys. Rev.* **29**:168 (April) 1949.
2. Sulzberger, M. B.; Baer, R. L., and Kanof, A.: Studies on the Toxicity of BAL on Percutaneous and Parenteral Administration, *J. Clin. Invest.* **25**:474 (July) 1946.
3. Sulzberger, M. B.; Baer, R. L., and Kanof, A.: Skin Sensitization to BAL, *J. Clin. Invest.* **25**:488 (July) 1946.

## ST. LOUIS DIABETES DETECTION DRIVE

CYRIL M. MACBRYDE, M.D., *St. Louis*

IN THE CITY of St. Louis during the six days, December 6 through December 11, 1948, 162 proved and sixty-six probable, or a total of 228 newly discovered cases of diabetes were detected. This modest but significant attack upon the problem of finding the estimated 1 per cent of undiscovered diabetic persons in the general population was the result of a concentrated case-finding campaign during which 17,451 urine specimens were examined free of charge and 604 instances of glycosuria were found.

Each person having glycosuria was offered a free blood sugar test and 458 (75.8 per cent) of the 604 had blood glucose determinations. Blood was drawn two hours after the last meal and amounts of 120 mg. per cent (true blood glucose method) or more were considered indicative of diabetes. Of the 458 specimens, 305 revealed glycemia of more than 120 mg. per cent (table 1) and of these, 143 came from

Table 1. Results of St. Louis Diabetes Survey.

	Number	Per Cent
Urine examined	17,451	
Glycosuria found	604	3.46
Blood sugars determined	458	
Hyperglycemia (over 120 mg.)	305	1.3
Proved new cases	162	0.9
Known diabetes	143	0.8
Probable, not proved (new)	66	
Proved plus probable (new)	228	1.3
All diabetics found (old plus new)	371	2.1
Hyperglycemic persons with obesity		75.0
Hyperglycemic persons age 40-70		84.0

persons previously known to have diabetes, while 162 came from persons with newly discovered diabetes. Since two thirds of the glycosuric persons proved to have diabetes and two thirds of the dia-

betes cases were previously undiagnosed, it is estimated that sixty-six of the 146 persons having glycosuria but not coming for blood sugar tests were also undiagnosed cases, making a probable total of 228 newly discovered cases.

The St. Louis campaign took place during the first National Diabetes Week, set aside by the American Diabetes Association for diabetes case finding and an educational campaign concerning diabetes throughout the United States. Various types of surveys were carried out in many cities.

Results of the St. Louis survey were:

1. New cases of diabetes diagnosed: 162 proved, plus sixty-six probable.
2. Total of 17,451 urines examined and 604 instances of glycosuria discovered. Every person with a normal test was so notified by postcard.
3. Every person with glycosuria (604) was urged by letter to go to a physician or clinic of his choice for further study.
4. Every person (305) with proved hyperglycemia was informed by letter of the urgent necessity of prompt medical attention.
5. Education and publicity through newspapers, other publications, lectures, talks, street car and bus signs and radio emphasized that:
  - a. Diabetes is much more common than previously realized, about 1 per cent of the population having known diabetes, and possibly another 1 per cent having undiagnosed diabetes.
  - b. Diabetes may be present with few symptoms, or mild symptoms, or may be manifested by disorders not promptly recognized as diabetic in origin.

With the assistance of the Publication Committee of the St. Louis Clinical Diabetes Society: Norman Drey, M.D.; R. O. Muether, M.D.; W. H. Olmsted, M.D., and Henry Oppenheimer, M.D.



c. It may occur at any age, but is more common after middle age.

d. Those who are overweight are especially susceptible.

e. Relatives of diabetic persons are more apt to develop diabetes than persons in families in which diabetes has not occurred.

f. Early treatment usually insures good health and long life. Even late treatment gives satisfactory results but discovery early in its course greatly improves the prognosis.

g. Diagnosis is simple, quick and inexpensive.

h. Treatment is usually fairly simple and more than half of patients with diabetes can be kept in good health with diet alone.

#### COOPERATING SOCIETIES; SPECIMEN COLLECTION

The survey was conducted by the St. Louis Clinical Diabetes Society, with the active cooperation of the St. Louis Medical Society, the St. Louis County Medical Society and the Mound City Medical Society (Negro). During the six days of the campaign, anyone in St. Louis or St. Louis County could obtain a free specimen bottle from his neighborhood druggist. The bottles bore detachable labels on which name, age, sex and address were written. The labeled bottles with specimens were returned to the druggists. Each evening collecting teams of the Retail Druggists Association of St. Louis collected the specimen bottles from each of their 350 member drug stores. Eighteen drug stores of the Mound City Pharmaceutical Association (Negro) also assisted. There was a gradually mounting interest in the campaign, the number of specimens collected and examined on each of the six days respectively being, Monday 332, Tuesday 1,145, Wednesday 2,084, Thursday 3,168, Friday 4,397, Saturday 6,325; total 17,451.

Workers in the campaign estimated that if the Diabetes Detection Drive had continued for another week or two that public interest would have increased progressively so that probably several times as many specimens per week would have been submitted. It is notable that on the sixth and last day of the collections, more than one third of the total specimens were turned in.

These figures show that as interest and information spread among the public, active participation rapidly mounts.

#### LABORATORY TESTS

The specimens were examined in a special laboratory in the St. Louis Medical Society Building by volunteer teams of medical students from Washington University and St. Louis University, and by volunteer technicians from doctors' offices and hospitals. Every specimen was examined on the evening of the day it was turned in at the drug store. The Galatest method was used for rapid screening for glycosuria and the Clinitest method was employed for checking doubtful tests. Supervision of the testing was done by members of the St. Louis

Clinical Diabetes Society and of the cooperating medical societies. The 458 sugar tests were done free of charge by the laboratories of Barnes Hospital, Firmin Desloge Hospital and the Jewish Hospital.

#### SELECTION OF THE FIELD

The primary purposes were two: (1) to discover as many unknown diabetic persons as possible, and (2) to spread sound information concerning diabetes and to encourage the public and physicians to make diabetes case finding a year-round practice so that the estimated undiscovered 1 per cent of diabetic persons in the general population can get prompt treatment and be restored to health.

Therefore, it was not attempted to collect large numbers of specimens through industrial plants, since most of these workers have already been screened for glycosuria by company physicians, and the yield of glycosuria would be low. As an example of this, one manufacturing firm was included, which submitted 350 specimens, all of which were negative for sugar.

Also, there was no attempt at collection of specimens through schools since diabetes is comparatively rare in childhood, and is promptly recognized as a rule. Only 10 per cent of persons submitting specimens were less than 20 years of age, because it was emphasized particularly that it was wished to test those who were middle aged or older, and obese persons and those of diabetic families. Of the 1,700 specimens from persons less than 20, thirty-three had glycosuria (almost 2 per cent) but not one of the twenty-three blood sugars taken from the glycosuric persons less than 20 years old exceeded 119 mg. per cent; therefore, not one person less than 20 years of age was diagnosed as having diabetes.

Since diabetes apparently occurs more frequently in women than in men and it was desired to reach the general public, especially those beyond middle age, the distribution of bottles and collection of specimens through neighborhood pharmacies throughout the city and county seemed an excellent solution. No similar attempt had been heard of and the idea was approached with some trepidation. Doubts were dispelled when enthusiastic cooperation was received from the Retail Druggists' Association of St. Louis. Member pharmacists not only conducted the collection of specimens and brought them daily to the central laboratory, but helped to finance the campaign.

#### ANALYSIS OF RESULTS

Of the 17,451 urine specimens examined, 604 showed glycosuria. The incidence of glycosuria was therefore 3.5 per cent. Previous general diabetes surveys have revealed an incidence of about 2 per cent. Our higher figure can be explained by the fact that those submitting specimens in our campaign did not represent a uniform sampling of the population but that our sampling was weighted by having a higher proportion of older persons, of obese persons and of persons in diabetic families; also,

there were 143 (0.8 per cent) known diabetics among the 604 (3.5 per cent) having glycosuria.

Blood glucose determinations were done upon 458 of the 604 persons having glycosuria, and of these, 305 had hyperglycemia. Of the 305 having

Table 2. *Blood Glucose Determinations.*

Blood Sugars mg. per cent	Known Diabetics	Diabetes Not Previously Known
Below 99	8	119
100-119	5	24
120-149	8	23
150-199	28	34
200-299	71	68
Above 300	33	37
Totals	153	305

hyperglycemia, 143 were previously known to have diabetes, while 162 were newly discovered diabetic cases.

Total number of diabetic persons found: 371 (2.1 per cent); (162 proved new, sixty-six probable new and 143 previously diagnosed).

Since age, sex and weight are believed to influence the statistical incidence of diabetes, it is of interest to analyze the figures by these criteria.

Since, as emphasized, the detection drive was deliberately aimed at those beyond middle age, it is gratifying to note that of all specimens submitted, 67.4 per cent were from persons over age 40, while in 46.2 per cent, the ages were over 50. Males and females were almost exactly equally represented. Of the 302 persons shown to have hyperglycemia, 147 were male and 158 female. The distribution of those having hyperglycemia is shown by sex and decades in table 3.

Table 3. *Hyperglycemia Distribution by Decades*

Age	Male	Female	Total
0-20			
21-30		2	2
31-40	10	10	20
41-50	22	23	45
51-60	65	58	123
61-70	38	49	87
71-80	11	16	27
80-90	1		1
Totals	147	158	305

The influence of adiposity is immediately evident in the figures, for 75 per cent of those persons having hyperglycemia were overweight, only 25 per cent being normal or underweight. Of the 255 hyperglycemic persons between ages 40 and 70, 201 (80 per cent) were overweight.

Of all the 17,451 urine specimens examined, 52 per cent were submitted by persons between ages 40 and 70, but the persons in these three decades yielded 255 of the 305 instances of hyperglycemia, or 84 per cent.

#### COMPARISON WITH OTHER SURVEYS

In Oxford, Massachusetts, a town of 2,500, a general survey including examination of nearly all of the residents disclosed seventy diabetic persons, thirty previously undiagnosed, a total incidence of diabetes amounting to 2.8 per cent. Examination of 3,169 persons in Jacksonville, Florida, disclosed forty-seven new cases of diabetes. Among those examined were 753 relatives of diabetics. About

four times as many instances of diabetes were found among these relatives as would be expected from the general population studies. In Brookline, Massachusetts, 3,650 persons were tested and fifty new diabetic cases were found.

In this survey, 17,451 urines were tested for sugar and 604 revealed glycosuria (3.5 per cent). Older persons, obese persons, relatives of diabetic persons and known diabetic cases account for the higher incidence of glycosuria than is usually discovered in general population surveys in which about 2 per cent is usually found (approximately 1 per cent known to have diabetes, and about 1 per cent previously undiagnosed). Although the St. Louis incidence of glycosuria was 3.5 per cent (higher than the 2 per cent usually found), the total of diabetic persons found was 371 cases (2.1 per cent), made up of 162 proved new, sixty-six probable new and 143 known. In the survey, it was purposely attempted to encourage all special groups apt to have diabetes to submit specimens, since the aim was not to examine a maximum number of specimens but to discover as many undiagnosed diabetic persons as possible.

In the St. Louis survey, 162 proved and sixty-six probable, or a total of 228 newly discovered cases of diabetes were diagnosed (1.3 per cent of 17,451 tests). Persons having previously known or suspected diabetes numbered 143 (0.8 per cent).

A preponderance of females among those having glycosuria or hyperglycemia was not found. Some authorities give figures suggesting that diabetes is commoner in females, but some of these figures at least are explained by a higher proportion of hospital admissions among women.

The 228 new diabetes cases plus 143 known diabetic persons account for 371 of the 604 instances of glycosuria, leaving 223. Of these, 143 had blood glucose values below 120 mg. per cent and may have either mild diabetes or alimentary or renal glycosuria. The remaining eighty instances of glycosuria may represent false positive tests, or various types of glycosuria, and possibly some cases of diabetes, since there has been no opportunity for further study of them.

#### THE COST AND THE GAIN

Actual cash outlay for the Diabetes Detection Drive was slightly in excess of \$2,000.00. This figure would, of course, have been several times as great except for the many hours of free time contributed by physicians, medical students, druggists, technicians and secretaries. In addition, it must be taken into account that bottles, printing and such were furnished at much reduced "community service" prices and that the St. Louis Medical Society provided free office space for six weeks and laboratory space for examination of urine specimens and collection of blood specimens. Reagent materials were donated. The hospitals did the blood sugar determination without charge.

The money expended was for secretarial services.



printing, stationery, postage and specimen bottles. All of the expense was met by voluntary contributions by members of the cooperating societies, public spirited laymen and business concerns.

If one takes 162 as the minimum number of new cases discovered, the actual cash cost per case was \$12.35. This figure does not, of course, reflect the gain in such intangibles as probable cases, making the public aware of diabetes and increasing public knowledge concerning the disease. Another intangible is the increase in good will of the public toward the medical profession through the demonstration that physicians are interested in and are doing much for the public health. The cooperating societies were stimulated to undertake further such efforts. It is evident that the medical profession can do effective public health work at low cost.

#### CONCLUSIONS

Since diabetes mellitus is a common cause of disability and death and accounts for much suffering and economic loss, efforts to discover the estimated 1 per cent of undiagnosed cases in the general pop-

ulation will be of great benefit to individual patients and also to the community.

Concentrated efforts such as the St. Louis Diabetes Detection Drive will result in the discovery of many new cases and will call attention to the importance of diabetes as a public health problem. Emphasis in such campaigns should be put upon the ease of diagnosis and the usual simplicity and good effects of treatment.

On the basis of experience, we would encourage other communities to conduct similar case-finding and educational campaigns. Continued efforts throughout the year should supplement the annual Diabetes Week, and all communities should coordinate their work through the American Diabetes Association.

By such public health work, physicians and medical societies can demonstrate their interest in promoting the health of the population as a whole. Cooperation upon the part of medical organizations and related groups such as the druggists was excellent and public appreciation of this unselfish work has been manifest.

634 North Grand Blvd.

## THE PHYSICIAN AND THE LAW

ROBERT A. MOORE, M.D., *St. Louis*

LAW IS THAT part of human knowledge which is concerned with the preservation of the social health of man. Medicine is that part of human knowledge which is concerned with the preservation of the physical and mental health of man. Thus, these two large fragments of knowledge, represented by two honorable professions, have much in common and, in fact, have the same basic philosophy—to preserve health. Both at times consider individuals and at times groups of individuals.

A break in social health is crime if it involves a few individuals, anarchy or revolution if more participate, and war if a large group takes part. It is probably significant that medicine has comparable words for disease; thus one speaks of sporadic disease, endemic disease, epidemic disease and pandemic disease as the number sick of the disease increases from a few to the greater part of the world.

The armamentarium of law is a body of agreements between the members of society which is called common law, constitutional law, statutory law and judicial law. These agreements are entered into, or more exactly stated, are enacted for the common good, and either for the preservation of social health or for the cure of social disease. The administration of the laws is delegated to a group

of men functioning as police officers, judges, lawyers, bailiffs, sheriffs and others.

The armamentarium of medicine is a mass of scientific information on the nature, cause, diagnosis, treatment and prevention of disease. Each fact of medical science corresponds to a law and relates to one facet of the problem of preservation of health. New facts are constantly added as new laws are enacted. The facts of medicine are utilized by the physician, the nurse, the laboratory technician, the dietitian and others to prevent or cure disease.

The complete analogy is that law protects man from man, while medicine protects man from bacteria, viruses and the other causes of disease.

Whenever two branches of learning are closely correlated and even integrated as are medicine and the law, inevitably there are conflicts. No matter how intimate the relation between the two, development of each is independent. Although progress appears superficially as a smooth, steady, upward surge of man toward a healthier, freer world, actually it is a series of steps. The steps in each field of activity are unequal in height and at times the masons of one staircase get ahead of the masons of another.

It is not difficult to see in the pages of history where the inequalities were so great as to lead to sudden reform or even revolution; witness the reformation, the renaissance, and the French and American Revolutions.

From the Department of Pathology, Washington University School of Medicine, St. Louis.

Presented as the First Annual Vincent Park Williams Lecture of the Jackson County Medical Society, Kansas City, Missouri, April 27, 1948.

Today there is an inequality which bids fair to strike a harder impact than any yet experienced by man. Scientists have discovered how to transmute the elements with at times explosive force before sociologists and experts in human relations have formed the basis for a healthy world society. As a matter of fact, there has already been a wait of several hundreds or thousands of years on the latter to equalize the discovery of the bow and arrow and gunpowder.

When the inequalities are small or touch only a relatively few people, the impact on society is minimal and is not always apparent. Law and medicine in the last hundred years have developed unequally and now is the time to correct the situation. At the risk of a charge of partiality and bias, this theme will be developed on the generalization that scientific medicine is several steps ahead of the law.

A second generalization is that society is becoming increasingly complex because of increasing knowledge and a larger world population.

Take the basic proposition of population as an example. There are about two and a quarter billion people in the world today. Not so many years ago there were only two billion, and in another twenty-five years there will be three billion. Food must be raised, harvested, transported, stored, processed and marketed in an increasing amount. Each step of the process must go forward. The slightest inequality may be disastrous and mean famine and death in some place.

Both medicine and law are caught in this maelstrom. There are so many laws today that not even lawyers are familiar with all of them. Medicine has become highly specialized. There are fourteen specialty boards and several more unofficial specialties of medicine.

This introduction sets the basis for a discussion derived from two generalizations combined into one—the complexities of modern society make inequalities in social structure and though more apparent, the end result of which inequality is conflict and a delay in the development of civilization. The role of the physician and the law in the solution of this problem will be discussed in four categories: the physician as a citizen, the physician as a witness, the physician in law enforcement and the physician in crime prevention.

#### THE PHYSICIAN AS A CITIZEN

In the last century the physician in a small community was frequently the first citizen. He was respected for his medical ability, for his unselfish devotion to a great calling, and for his general judgment of men and things. There were few community activities in which he did not take part.

Despite the fact that the physician is the best educated person in the community, at least in years—seven to eight years of college—the medical profession has today largely lost that leadership. There are four general reasons for this; first, the emergence of other leadership groups; second, the growth

of urban population centers; third, the transition of medical education from general education in the broad sense to a purely scientific education; and fourth, an increasing mistrust of the motives of the medical profession by the public.

There is little that can be done directly about the first two of these—the emergence of other leadership groups and the growth of urban centers. In fact, both are desirable for modern society and should be encouraged by everyone, including the physician. But physicians should not stand idly at the roadside and watch the world go by.

The medical profession cannot expect to participate in the leadership of all or even most things, but is about to or perhaps has already lost the leadership in their own field—health—to other groups, particularly the welfare group, largely because the physician concerns himself with his own problems and is not first a citizen, and then a doctor.

Rarely does the physician take time from a busy practice to serve as an informed, interested citizen except when medicine or the medical profession is directly concerned or threatened. It is impossible today to separate medical care from health care and to distinguish health care from welfare. The preservation of health means not only protection from infectious agents, but adequate housing, nourishing food, recreational activities, youth centers, vocational guidance, physical and mental rehabilitation and a host of other activities.

Who has a broader view of this segment of social problems than the physician? If there is no one, and I believe there is not, then the physician should be the leader, whether it is a voluntary or governmental activity in either the formative or operational phase. This does not mean that he should support every harebrained idea which it is claimed will benefit the public. The true leader is out in front and not behind or off at the side fighting off attacks.

The third point, the change in the content of the education program, is the cause of a serious defect of society—a partial or complete loss in the social consciousness of the better educated groups. It applies not only to medicine but to many other areas and professions.

The desire and the demand for factual scientific knowledge by the premedical student and medical students are so great that little or no time remains for a general cultural education. Social consciousness is a cultivated attribute of man, not one with which he is natively endowed. The child is essentially a self-centered organism and it is only by education that a sense of responsibility to his fellow man is developed. Some of this education is in the home, but increasingly as the higher ranges of education are approached it is in the classroom and laboratory.

The fourth point is the increasing distrust of the motives and objectives of the medical profession by the public. This is most regrettable but true. A





# **DRAMAMINE\*** *(Brand of dimenhydrinate)*

has been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for the prophylactic and therapeutic relief of motion sickness.

\*TRADEMARK OF G. D. SEARLE & CO.



# Mosby Books

## IN OBSTETRICS

### ATLAS OF OBSTETRIC TECHNIC

#### NEW SECOND EDITION

By PAUL TITUS, M.D., Obstetrician-Gynecologist to the St. Margaret Memorial Hospital, Pittsburgh; Secretary, American Board of Obstetrics and Gynecology. ILLUSTRATIONS BY: E. M. Shackelford, Formerly Medical Illustrator, John C. Oliver Memorial Research Foundation, St. Margaret Memorial Hospital, Pittsburgh. 197 Pages, PRICE, \$7.50.

AN ENTIRELY CLINICAL WORK, PRESENTING OBSTETRICS WITH STEP-BY-STEP, CAREFULLY PREPARED ILLUSTRATIONS ACCOMPANIED BY ADEQUATE TEXT.

The subject of modern obstetric technic now accepted as standard for normal and operative deliveries, as well as for various complications of pregnancy and the puerperium is beautifully presented in pictorial form by Dr. Titus.

This new Second Edition includes the many changes in obstetric technic since the appearance of the First Edition of this very popular Atlas and the book has been rearranged into better working sequences. New additions to the book include a section on Pregnancy and Antepartum Care—Analgesia and Anesthesia. It has been thoroughly revised and modernized.

### Essentials of

### OBSTETRICAL AND GYNECOLOGICAL PATHOLOGY

#### NEW SECOND EDITION

By ROBERT L. FAULKNER, M.D., F.A.C.S., Assistant Professor of Gynecology, The Western Reserve Medical School; Associate Gynecologist, University Hospitals of Cleveland; and

MARION DOUGLASS, M.D., Formerly Assistant Professor of Gynecology, The Western Reserve Medical School. 400 Pages. 300 Illustrations. PRICE, \$8.75. 3 in Color.

A MONOGRAPH PRESENTING THE SUBJECT OF SPECIALIZED PATHOLOGY AS IT RELATES TO OBSTETRICS AND GYNECOLOGY—Simply and Graphically.

In this new Second Edition, the arrangement of material remains the same—anatomical, starting with the vulva and vagina, then taking up the endometrium, uterus, tubes, ovary and finally, pregnancy. Some sections have been amplified. Immense improvement will be seen in the illustrations and the addition of many new ones gives the book very special value. For instance, several ulcerative lesions of the vulva, tissue from which seldom appears in a laboratory of surgical pathology unless for special study, are presented in outline form.

The book will be useful to all specialists in obstetrics and gynecology—and to practitioners who do not pretend to be pathologists; to anyone with no recent contact with histology or pathology who is in search of a simple and unadorned text sufficiently illustrated to be of practical clinical value.

### ORDER FORM

The C. V. Mosby Company  
3207 Washington Blvd.  
St. Louis 3, Missouri



MoS 11-49

Please send me:

Titus' ATLAS OF OBSTETRIC TECHNIC—2nd Edition..... \$7.50

Faulkner-Douglass' Essentials of OBSTETRICAL AND GYNECOLOGICAL PATHOLOGY—2nd Edition..... \$8.75

....Enclosed find check.

....Charge my account.

Name.....

Address.....



survey made some years ago by the Michigan State Medical Society showed 28 per cent of the public "do not believe doctors are as honest as they should be in all dealings with patients." The Public Relations Counsel who made the survey had the following comment. "You may say 'That isn't so bad—not many of them think we're actually dishonest;' but it is bad. It does not make any difference what their reasons are, the fact remains that 28 per cent of the people of Michigan believe the medical profession is not as honest as it should be. You may say 'They probably think other professions (including the advertising business) are far from honest.' That doesn't make any difference either."

The recent publicity about overcharging in the Veterans Administration, kickbacks by optical shops and laboratories and refusal of physicians to accept night calls intensifies this distrust. Some of this distrust stems from a misunderstanding of motives. One should always be sure he can give an affirmative answer to the question "Will this improve medical care for the people?" and ignore the question "Will this benefit the medical profession?"

The great majority of physicians are in medicine because of a sense of service and not for the financial return. In fact, no physician has ever accumulated a fortune from the practice of his profession. Their lives are devoted to the prevention and cure of disease. But, in doing this, they must not isolate themselves in an "ivory tower." They must be citizens, they must have a highly developed social consciousness, they must provide leadership in many fields, particularly health, and they must constantly strive toward the day when the function of medicine will not be to cure disease, but to preserve health.

Specifically, the physician, as the protector of the health of the people, must promote the passage of laws which will improve health and must act vigorously against enactment of laws which will endanger health.

Laws relating to the practice of medicine must be watched to guard against exploitation of the public by quackery. This is done not to benefit physicians but to protect those who become ill. This is a constant fight as medicine becomes more complex. There are always attempts to find a short cut as a member of the healing arts or to foist an unproved quick cure of disease on the unsuspecting.

Laws concerning public health are of vital interest to the physician, not just quarantine regulations but all manner of laws and regulations. Inadequate treatment of garbage is probably the basis of the endemicity of trichinosis. Inadequate inspection of restaurants may be responsible for serious enteric disease. Lack of rubbish collection breeds rats, and rats and the insects on rats carry disease.

Laws in many other phases of human life might be mentioned: fortification of bread with vitamins, slum clearance, and health of school children, to mention only a few.

Medicine has the information and means of im-

proving health, but it is necessary to apply them properly. Medical science has progressed ahead of the law. The physician should lead toward an equalization.

#### THE PHYSICIAN AS A WITNESS

It is as a witness that the physician has his most intimate and frequently uncomfortable contacts with the law. In fact, the contacts are so uncomfortable that most physicians decline to appear voluntarily for either the defendant or plaintiff in civil suits.

This situation is most undesirable because it is the physician who usually has the most essential information on which civil suits resulting from trauma are based. Why is it that physicians have developed an antipathy to appearing as a witness? Many will say it is because they were browbeaten, mistreated, cajoled, or ranted at by the attorney for the other side the last time they appeared.

The intention is not to defend lawyers, but there is a logical background for this attitude, and some corrective measures are indicated. While there are many characteristics of court procedures, there are three which appear to have particular bearing on this problem—the adversary system, the demand for exact facts and the resolution of a conflict of facts or opinions.

The adversary system is the heart of our freedom. Two opposing individuals or groups, one of whom has been injured either figuratively or literally, come before the court to settle the differences of opinion. The accused person has had his "day in court." Every witness who appears then must accept the right of the opponent to question him or to break down his story. At times, rightly or wrongly, attorneys use stratagem, subtle accusation, or even verbal intimidation to accomplish this. They know that when a human being is angry his thoughts are not well ordered and he may easily be caught in an inconsistency. A tiny inconsistency is in a few minutes a mighty break and all of the testimony of this person is figuratively impeached.

Supposedly, lawyers are officers of the court and are only seeking to bring out the truth. It is not advocated that the adversary system be abolished, but there are better ways to elicit the truth than are used by many attorneys.

Similarly, the decision in a suit which may involve life itself must be based on exact fact, and it would be hypocrisy for one who claims to be a medical scientist to urge anything less than the exact truth. But, again, there are limits to the exact truth, at least as far as medicine is concerned.

The exact truth as applied in court requires a flat answer of yes or no. There is practically no single question in medicine which can be so answered. Suppose a physician is asked, "If it be proved that this patient had cancer and was untreated, do you believe, doctor, that he or she will die of the disease?" The superficial answer is yes, yet there are about forty undoubted examples of

spontaneous cure of cancer in the medical literature.

Or, "Did the blow in the abdomen cause the cancer in this patient?" Perhaps, but certainly not a positive yes. Many people suffer from a blow to the abdomen and never develop cancer. Yet there are too many sequential observations of trauma and cancer to deny a relation. And, most important, how can it be certain that the cancer was not already present at the time of the blow? But, the lawyer is not satisfied with this in-between position, maybe yes and maybe no. Perhaps he tries to force an exact answer, or perhaps he poses a hypothetical case and soon has the physician giving an exact answer when he never intended to do so.

Then after hours of this, another physician goes on the stand. He, the equal of the first in education and experience, gives completely different answers.

The simple deduction from all this is that medicine is not an exact science, but much of it is a matter of judgment. When court procedures were established two hundred to five hundred years ago, medicine was much more exact because physicians did not know enough to realize what they did not know. It is the old story that the freshman is an expert and knows it all, but when he becomes a senior he is not so sure.

What is the solution? Simply, it is the appointment and payment of all medical experts by the court. Qualified lists of experts in various specialties could easily be established. This would not necessarily end differences in judgment, but at least the differences would be between experts and not amateurs. Science would no longer be born anew in every law suit in which two experts disagree.

The third point is the resolution of a conflict of facts or opinions. Procedure in this respect is illustrated by a case relating to a person's sanity. Numerous friends and relatives testify that they noticed this or that queer or normal action. Then one or more physicians testify for the plaintiff's attorney that they believe the person of unsound mind. This is followed by an equal number of physicians called by the defendant's attorney who swear, just as sincerely and vehemently, that it is their opinion that the person is of sound mind.

The case now goes to the jury, which decides from the conflicting evidence on sanity. This is in line with our democratic traditions and is something the English speaking world has fought for and held to tenaciously for a thousand years—the right of trial by a jury of equals, but consider an analogous situation. A patient is admitted to the hospital. The symptom is pain in the right upper quadrant without tenderness. The white blood count is 12,000. Doctor X, one physician called by the patient, after a thorough physical examination concludes that the diagnosis is acute cholecystitis. Doctor Y, another physician called by the patient, also examines the patient and concludes that the diag-

nosis is coronary occlusion. There is a difference of opinion.

To continue the analogy, the two physicians would then go out on the street to call in twelve citizens and present their respective opinions. The jurors after deliberation would decide whether the patient has acute cholecystitis or coronary occlusion. Fantastic? Yes, but it is exactly what we do in our courts every day—ask those who know little or nothing about a complex scientific subject to decide between two conflicting opinions. Not so many years ago, in a famous paternity suit, after an array of competent immunologists testified unanimously that the accused could not possibly be the father, a jury decided that he was.

The solution is simple—the appointment of qualified referees in cases involving scientific facts and reliance on them to decide conflicts. This, of course, must be done in such a way as not to impair the time-honored right of trial by jury.

On the second phase of the subject, the physician and the law, it is concluded that medicine is in advance of the law. Corrective measures to improve court procedures and to utilize more effectively modern scientific knowledge are urgently needed.

#### THE PHYSICIAN IN LAW ENFORCEMENT

In the third topic, the physician in law enforcement, there is the greatest discrepancy and inequality between medicine and the law.

In fact, there is no word to describe this inequality except archaic. The present system for the utilization of scientific and medical knowledge in law enforcement dates from medieval times when the king, needing someone to make sure that he got his share of all treasure trove washed onto the shores of England, appointed coroners.

Although England has gradually changed the concept, duties and qualifications of coroners, the United States for the most part retains the concept of the coroner of Eighteenth Century England which our forefathers brought with them.

To be specific, in Missouri if there is a casual or accidental death, the coroner is directed to take charge of the body and determine whether or not there has been a violation of criminal law. To do so he convenes a jury of six tried and true citizens and this jury is instructed "by a view of the body" to determine "how and by what means" this person came to his or her death.

The coroner is elected, and unfortunately in many counties the position is looked upon as a minor or major political plum to be given to a faithful party worker who may or may not have knowledge of law enforcement, but almost always has no training or experience in scientific crime detection. The coroner's jury most likely is composed of those with little or no higher education, people who are there probably as a matter of political patronage.

It is fantastic that the American people in this modern age entrust to persons with no background and with no training the direction and determina-





## During Pregnancy...

### VITAMIN REQUIREMENTS ARE INCREASED

Vitamin deficiency may occur as a result of increased requirements during pregnancy, febrile conditions, hyperthyroidism, or other conditions in which the metabolism is greatly augmented.

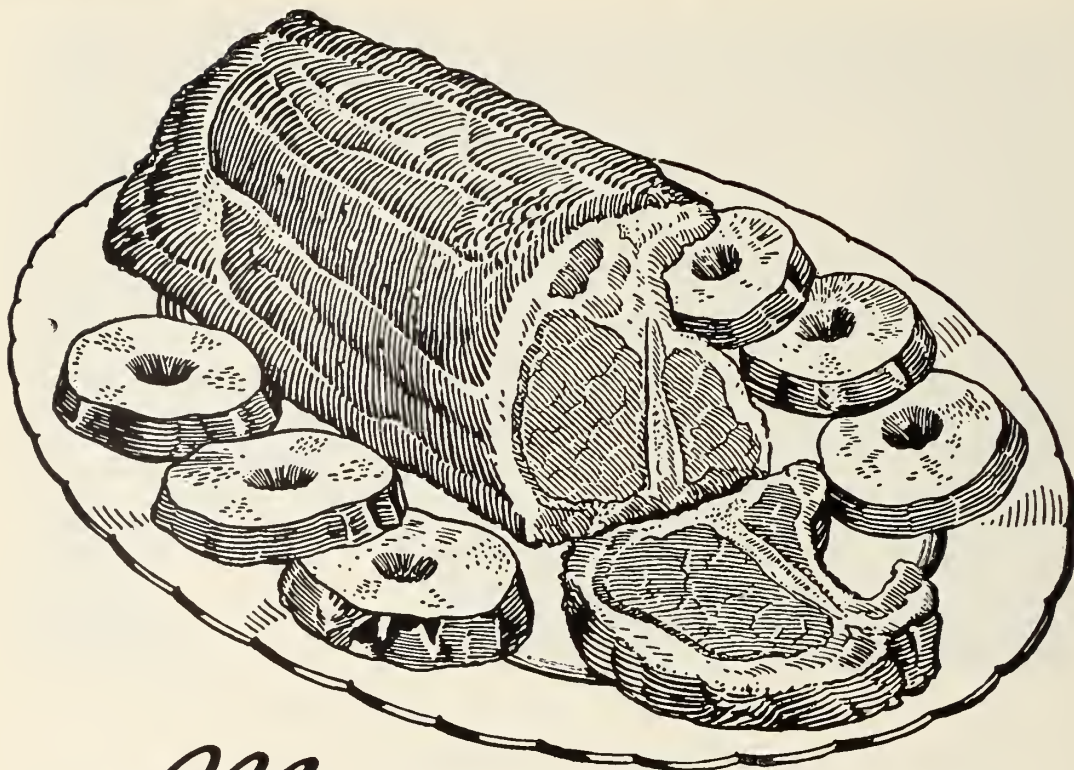
The vitamin deficiencies most commonly seen are those of the B complex. Since deficiency of only a single vitamin of this group rarely occurs, and since many of the metabolic functions of

members of the vitamin B complex are closely related, best results are obtained in most cases by administering *all* of the B complex vitamins known to be of importance in human nutrition. This can be done most conveniently by prescribing a sufficiently potent preparation containing these vitamins combined in properly balanced proportion.

# MERCK VITAMINS



MERCK & CO., Inc. *Manufacturing Chemists* RAHWAY, N. J.



# Meat...

## Outstanding Value...

### Outstanding Nutritional Benefits

Whether the pocketbook calls for economy or permits satisfaction of that urge for the fanciest cuts, meat gives your patients full value for their money. Every cut and kind of meat supplies, *in abundance*, these essential nutrients:

1. Biologically complete protein . . . the kind which satisfies the requirements for growth and which is needed daily for tissue maintenance, antibody formation, hemoglobin synthesis, and good physical condition.
2. The essential B complex vitamins, thiamine, riboflavin, and niacin.
3. Essential minerals, including iron in particular.

In addition to these tangible values, meat ranks exceptionally high not only in taste and palate appeal, but also in satiety value.

The instinctive choice of meat as man's favorite protein food has behind it sound nutritional justification.\*



The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

\*McLester, J. S.: Protein Comes Into Its Own, J.A.M.A. 139:897 (Apr. 2,) 1949

**American Meat Institute**  
Main Office, Chicago...Members Throughout the United States



tion of the question of whether or not a crime has been committed.

It is true that the coroner may call in a physician to perform an autopsy. But every physician is not capable of performing an autopsy, and the day has come when not every pathologist is capable of performing all medicolegal autopsies. The reason for believing this is that scientific crime detection demands specialized training and points of view which are not possessed by the general pathologist and certainly not by all physicians.

The plan which is suggested to replace the present medieval coroner system is relatively simple. It is based on the generality that those trusted by the people to use modern scientific methods in crime detection shall be trained for this type of work. Several subgeneralizations follow: first, that these officers of government shall be appointed on a civil service plan and, second, that the plan shall be state-wide rather than county-wide in order to bring the same type of service to all communities.

It has come to be accepted in this democratic government that nonpolicy making officers shall be appointed. There is as much sense in electing police officers, employees of municipal power plants or teachers as there is in electing the agent of government who investigates crime.

A state-wide plan is necessary if all regions and counties are to have equal service. There are wide expanses in Missouri in which the demand is not sufficient to justify employment of a local medicolegal examiner, yet these rural areas need his services as much or more than the urban regions. It is also an accepted principle of government that all people shall have the same advantages, and taxes collected need not be expended in the same ratio geographically. This principle is widely applied to schools and roads.

Through the efforts of the medical and legal professions the coroner is no longer a constitutional officer in Missouri. The new constitution contains no mention of the office or person. Hence by an act of the legislature a new plan could be put into operation.

Specifically it is proposed that an office of state medicolegal examiners be established in the Division of Health and Welfare. This office, centrally located in Jefferson City, would employ ten to twelve trained pathologists who would be stationed at seven or eight key points in the state. Certainly one would be in Kansas City and one or two in St. Louis. In addition a central or branch laboratory of toxicology would be established. The central office would have available immunologists, anthropologists and other skilled personnel to assist in a case anywhere in the state. Finally, a physician or pathologist would be designated in each county to make preliminary investigations.

The plan might work as follows: a person is found dead. The local police and local representatives of the medicolegal examiners are called in. If the circumstances are at all unusual, the regional medico-

legal examiner would be sent for. He would collect all scientific evidence—including the performance of an autopsy if indicated—and with the assistance and counsel of the branch or central laboratory come to a conclusion concerning the manner of death. At the same time police officers and the sheriff or the sheriff would make an investigation. All observations and conclusions would then be placed before the district attorney or a judge for action.

It should be noted that the medicolegal examiners would rarely collect evidence that by itself made a decision of innocence or guilt. However, they would furnish valuable pieces of information which, when fitted with other evidence, would make a conclusive case. In other words, medicolegal examiners should not act as an independent unit, but rather they should work more closely than coroners ever have with the police, sheriff or government agencies.

The cost of such a plan would not be significantly greater than the present cost under the coroner system, a system which costs the people of Missouri not less than \$135,000 a year.

The law today does not take advantage of the great fund of scientific information available for crime detection and law enforcement. The time is long past due when the situation should be corrected.

#### THE PHYSICIAN IN CRIME PREVENTION

It is becoming increasingly apparent that most of those who commit crime have diseased minds, and disease of the mind is one of the aspects of medicine. The term diseased mind means not just the manifest psychoses known to everyone but also the emotional instabilities and maladjustments which are far more common and of greater importance to the maintenance of a healthy society.

In primitive society man punished his fellow man who broke the rules for common good by eliminating him completely and forever—capital punishment. As civilization progressed capital punishment was reserved for the more serious crimes, and involuntary detention was substituted for lesser crimes. Little attention was given to the conditions of the detention.

Just before and after 1800 the basic thought of modern criminology emerged—detention under conditions which will lead to reform and reassimilation into society on discharge. To do this, sanitary conditions were improved, recreational facilities were provided and industry established both to keep the men busy and to teach a trade. Then came partial segregation by the establishment of reformatories in contrast with penitentiaries.

What has been done is only a beginning. The philosophy of reform is correct, but reform of a person with a behavior problem or a social maladjustment is something more than mere detention under good conditions.

It is here that medicine has something to offer—

first, research in the mental patterns of those who commit crime and, second, treatment of the inmate by psychiatrists and clinical psychologists. Only then will the efforts of the social and welfare worker be of lasting benefit.

The social stability of man is largely set during childhood. Behavior problems, insecurity and anti-social attitudes originate in the formative years. At first they are slight and can be corrected easily. Later they are ingrained and not easily shaken off. To protect innocent members of society from crime calls as much for preventive measures as for detention and attempted cure after the crime has been committed.

Child delinquency is one of the major problems of society, and medicine can contribute more than any other discipline to its solution. The establishment of child guidance centers or youth development centers is a necessity for the future.

One broad policy of such a clinic would be to provide a comprehensive program of rehabilitation of children so they may become useful members of society and contribute to the economic life of the nation. Translated into detail, this policy means that the clinic would have a basic staff of pediatricians, psychiatrists, psychologists, teachers and social workers. The staff would see all the children and would give treatment in their respective fields.

As examples of this policy, a few cases may be cited. A child is made fun of by his or her school-mates and is on the road to an antisocial career. There is a physical defect such as "winged" ears, perhaps no worse than many other children have, so that the parents have given little thought to it. A good talk with the staff of the clinic reveals the real cause of the antisocial behavior. The child is referred to one of the plastic surgeons of the hospital for correction of the abnormal ears. After the operation, the child returns to the clinic and with a little help from a sympathetic psychologist is led back into a normal childhood. A potentially antisocial individual of the next generation has been saved.

Another child has developed an antipathy for school, the reason for which is not apparent. Preliminary examination in the clinic shows that the real difficulty is an inability to read. This has led to a poor scholastic record, reprimands by the teacher, scorn by some classmates and eventual dislike of school. Skillful guidance in the clinic by a gifted teacher quickly corrects this deficiency in reading skills and the child returns to a school life which is enjoyed. A potentially illiterate adult of the next generation has been saved.

Finally, another child is irritable and becomes resentful of all authority at home and at school. It is only a short step to disrespect for constituted law. A careful study in the clinic reveals that the mother is a highly emotional person. There is little wonder that the child is pulled first one way and then another and has an unhappy home life. The problem is discussed with the mother and she is treated in the clinic or is referred to a psychiatrist. A possible criminal of the next generation has been saved.

Here is a major crossroads where the physician and the law meet and where medicine can contribute to the social health of the next generation. As the twig is bent, so grows the tree.

#### CONCLUSION

A philosophic theme has been presented—the complexities of modern society make inequalities of social structure and though more apparent, the end result of which inequality is conflict and delay in the development of civilization.

This theme has been applied to the physician and the law with the conclusion that there are gross inequalities wherein the law has not fully utilized modern medical knowledge for the improvement of social health.

Physicians and medicine are willing and able to provide the leadership needed to make their small contribution to the preservation of health—physical, mental and social—for a freer and happier world.

600 S. Kingshighway.

---

#### DRUGS CUT DEATH RATE OF RARE MUSCLE DISEASE

Modern methods of treatment have reduced the mortality rate of myasthenia gravis to about 10 per cent, according to two doctors from the University of Texas School of Medicine, Galveston.

Untreated, the disease runs a fatal course in 50 to 75 per cent of cases in a few years, Drs. Charles T. Stone

and J. Alfred Rider write in the September 10 *Journal of the American Medical Association*.

Drugs, principally neostigmine and tetraethylpyrophosphate, give complete relief in some cases and have greatly reduced the mortality rate of the disease, which is now probably about 10 per cent, they say.





DRINK  
*Coca-Cola*  
TRADE MARK REG.

You trust  
its quality

# MILWAUKEE SANITARIUM

WAUWATOSA, WISCONSIN

## FOR NERVOUS DISORDERS

Maintaining the highest standards for more than a half century, the Milwaukee Sanitarium stands for all that is best in the care and treatment of nervous disorders. Photographs and particulars on request.

(Chicago Office— 1117 Marshall Field Annex  
Wednesday, 1-3 P. M.)  
Telephone—Central 6-1162

JOSEF A. KINDWALL, M.D.  
CARROLL W. OSGOOD, M.D.  
WILLIAM T. KRADWELL, M.D.  
BENJAMIN A. RUSKIN, M.D.  
LEWIS DANZIGER, M.D.  
RUSSELL C. MORRISON, M.D.  
JAMES L. BAKER, M.D.  
ROBERT A. RICHARDS, M.D.  
ARTHUR J. PATEK, M.D., Consultant  
G. H. SCHROEDER, Business Manager

COLONIAL HALL—One of the 14 Units in "Cottage Plan."



## PRESIDENT'S PAGE

The showing of color television will be one of the features of the scientific program at the Centennial Session next March. This will be the



first showing of color television in St. Louis. Actual operations and medical clinics will be shown on the screens at Hotel Jefferson while they are being performed at St. Louis City Hospital.

It is not too early to start making plans to attend the Centennial meeting. Why not mark your calendar now?

Time: March 26, 27, 28, 29, 1950.

Place: Hotel Jefferson, St. Louis.

*Wallis Smith.*



# THE JOURNAL

of the

Missouri State Medical Association

623 Missouri Bldg. Telephone: Newstead 0404-05

Subscription . . . \$3.00 a year in advance

*Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent.*

NOVEMBER, 1949

## EDITORIALS

### COLOR TELEVISION TO BE FEATURE OF 100TH ANNIVERSARY SESSION OF THE ASSOCIATION

Color television will be shown for the first time in Missouri at the 100th Anniversary Session of the Missouri State Medical Association to be held at the Jefferson Hotel, St. Louis, March 26 through March 29, 1950. Surgical procedures and medical diagnoses and treatment will be transmitted from the St. Louis City Hospital to the Gold Room of the Jefferson Hotel. Color television makes it possible for the first time for members attending the session to view the actual operations and medical work rather than hearing oral reports. However, much material that can be presented best in the form of presentations directly before the audience will be given by outstanding men in their particular fields. Some of these presentations will include discussions of heart disease, obstetrics, surgery, chest diseases, diabetes, anesthesiology, orthopedics and pediatrics.

The committee in charge of programs to be presented over television, which acts as a subcommittee of the Committee on Scientific Work, consists of Cyril Costello, M.D., Chairman, Raymond O. Muether, M.D., Paul O. Hagemann, M.D., and Leo V. Milligan, M.D., St. Louis.

Another feature of the 100th Anniversary Session will be the distribution of the Handbook of the Association giving much information about the Association and a roster, with full information, of members of the Association. A history of the Association written by Robert E. Schluter, M.D., St. Louis, also will be presented at the Session.

For the convenience of members a form for making hotel reservations for the session appears on page 810 of this issue of THE JOURNAL.

### IODINE AND NUTRITION

The progress of nutritionists has brought to the fore the significance of "trace" elements in the diet.

Copper, manganese, magnesium iron, iodine, co-

balt and many others undoubtedly will be found to play an important role in good nutrition.

Iodine already is well established as an extremely important constituent of the daily diet. The lack of adequate iodine in the diet may lead to goiter as indicated by the incidence of this disease in the Pacific Northwest and in areas around Lake Michigan. Sebrell in an article in a current issue of *Public Health Reports* states that the use of iodized table salt in these areas is capable of reducing the incidence of goiter to as little as 2 or 3 per cent.

In addition to iodine's role in reducing the incidence of goiter, it also plays a role in the function of other glands due perhaps to the control which the thyroid exercises on these glands.

The failure to obtain adequate amounts of iodine leads to a deficiency in quantity or quality of the thyroid hormone, thyroxin. Deficient thyroxin may lead to malfunction of various systems of the body including heart, central nervous system and reproductive organs. It should be emphasized that under certain circumstances the body may function normally with a minimal amount of thyroxin but increased demands such as fever, infection, pregnancy and lactation may result in an actual deficit.

It is important that the supply of iodine be adequate even though a goiter is not present or imminent. Sebrell states that adequate iodine intake has reduced the number of miscarriages and increased the milk supply of nursing mothers.

Iodine can be supplied in adequate amounts through the use of iodized salt, the addition of 0.01 per cent of iodine to the salt being sufficient. Such salt is entirely safe and there is no danger connected with its use since any excess of iodine obtained in this way is eliminated.

It is necessary to bear in mind that present methods of securing food stuffs may make it possible for a person to develop an iodine deficiency even though they do not live in an iodine poor area. Food raised in iodine poor areas may be shipped in and consumed for long periods of time, leading to a deficiency.

Farmers and stockmen are aware of the need of trace elements in the economics of their farms and cattle and it is logical to believe that the quality of foods in this regard will improve.

In the interest of good health and maximum efficiency the profession may well go along with the Public Health Service and the producers of table salt in their educational campaign on the importance of iodine in the diet.

### HANDBOOK ROSTER

The Roster of Members to appear in the Handbook of the Association will be made up from information given on postcards returned by members to the Directory Department of the Association. The majority of members have returned these cards and the roster is in process.

If any member failed to receive a card or has

not returned his, the Committee on the Handbook request that this be taken care of at once and, also, that full information be given on the card as this is the only information available to the personnel compiling the roster.

## NEWS NOTES

Frank H. Hodgson, M.D., Kansas City, was a guest speaker before the Kiwanis Club of Harrisonville on August 30 and spoke on "The Federal Compulsory Health Plan."

Paul I. Hoxworth, M.D., Cincinnati, assistant professor of surgery, University of Cincinnati, will speak on "Cancer of the Large Bowel" at a dinner meeting at the Daniel Boone Hotel, Columbia, on November 17. The meeting is sponsored by the Ellis Fischel State Cancer Hospital, the State Division of Health and the Missouri Division of the American Cancer Society.

Harold W. Dargeon, M.D., New York, will speak on "Cancer in Children" and Albert Hand, M.D., Texarkana, Texas, will talk on "Observation on Treatment of Poliomyelitis in San Angelo, Texas, 1949" at Children's Mercy Hospital, Kansas City, on November 12.

James W. Allee, M.D., and Maurice E. Cooper, M.D., Columbia, were recently appointed members of the Columbia Board of Health.

George Miles, M.D., Kansas City, was a guest speaker at the Wadsworth Veterans Hospital, Wadsworth, Kansas, on September 16, and spoke on "Cancer of the Breast." Dr. Miles spoke in Centerville, Iowa, on September 22 at the Regional meeting of the American Cancer Society on "Gastrointestinal Malignant Disease."

Vincent T. Williams, M.D., Kansas City, spoke before the Rotary Club at Joplin on September 8 on compulsory health insurance.

W. P. Bunting, M.D., Kansas City, spoke before the Miami County (Kansas) Medical Society at Paola on September 16 discussing "Hoarseness."

E. Lee Dorsett, M.D., St. Louis, was a guest at a postgraduate conference of the Eighth Councilor District of the Illinois State Medical Society at Mattoon, Illinois, on October 20. He spoke on "Eclampsia."

Gilbert Forbes, M.D., St. Louis, will speak at the meeting of the General Practitioners Study Club of Greater St. Louis on November 16 on "Management of Convulsive Disorders." The meet-

ing will be held at the home of John O'Connell, M.D., St. Louis County.

Physicians who have appeared recently on programs of component medical societies under the auspices of the Committee on Postgraduate Course follow:

A. Graham Asher, M.D., Kansas City, spoke at a joint dinner meeting of ten county medical societies at Chillicothe on "The Management of Congestive Heart Failure."

Paul Hagemann, M.D., St. Louis, spoke before a meeting of the Cole County Medical Society at Jefferson City on "Rheumatoid Arthritis."

R. O. Muether, M.D., and William A. Knight, M.D., St. Louis, spoke before an evening dinner meeting of the Tenth Councilor District at Sikeston on "Chronic Recurrent Pancreatitis."

Charles R. Doyle, M.D., St. Louis, spoke before the Phelps-Crawford-Dent-Pulaski Counties Medical Society at Rolla on "The Management of Varicose Veins."

Henry C. Willumsen, M.D., St. Joseph, spoke before an evening dinner meeting of the Saline County Medical Society at Marshall on "Complications Arising in the Third Stage of Labor."

Robert J. Mueller, M.D., St. Louis, spoke before a meeting of the Cole County Medical Society in Jefferson City on "Psychosomatic Medicine."

Arch J. Beatty, M.D., Kansas City, spoke before a meeting of the Jasper County Medical Society on "The Management of Hyperthyroidism."

Robert Dean Mattis, M.D., St. Louis, spoke before a meeting of the St. Francois-Iron-Madison-Washington-Reynolds Counties Medical Society at Farmington on "Common Eye Conditions of Interest to the General Practitioner."

Robert C. Davis, M.D., Kansas City, spoke before an evening dinner meeting of the Eighth Councilor District at Lamar on "The Many Manifestations of 'So-Called' Colitis."

M. Pinson Neal, M.D., Columbia, spoke before an evening dinner meeting of the Sixth Councilor District at Butler on "Diagnoses Commonly Missed in General Practice."

## MUSINGS OF THE FIELD SECRETARY

Members of the House Interstate and Foreign Commerce Committee who recently inspected the operation of the governmental medical scheme in England should have some interesting and valuable parallels to draw these days.

Now that Russia supposedly has the A-bomb, it is probable that more tax money will go into this country's military developments. If H. R. 6000 (Social Security Amendments of 1949) as passed by the House this last month becomes law, considerable increase in both employers' and employees' payroll social security tax will soon occur. Apparently workers' pensions and insurance will



a bright UROGRAM

and a clear solution



By intravenous injection, NEO-IOPAX\* provides not only a "bright urogram" that permits accurate diagnosis, but also significant freedom from severe systemic reactions. Sterile, crystal clear and containing no foreign particles, NEO-IOPAX has justly earned its enviable record for relative safety among urographic agents.

**NEO-IOPAX**

(brand of sodium iodomethamate)



When retrograde pyelography is indicated, NEO-IOPAX will also be chosen because it is nonirritating to delicate urinary tract membranes.

\*®

*Schering*

CORPORATION • BLOOMFIELD, N. J.



NEO-IOPAX

be agreed to by numerous large companies—in some cases the companies to pay all the pensions with workers contributing to the insurance. Is it reasonable to assume that certain prices may go up under these conditions? Could this all add up to higher prices and increased taxes? Where do we go from here?

With the tuberculosis hospitals running over with patients and, in many cases, quite short of professional personnel, some are proposing that more general hospitals accept and care for tuberculosis patients. Are there too many reasons why this could not and should not be done?

The Missouri Academy of General Practice has embarked upon a pilot endeavor of promoting a series of postgraduate lectures for general practitioners to be held at Fayette each Wednesday evening from October 12 through November 16. These affairs will begin each time with a dinner, followed by two papers and a discussion period. Credit toward the required 150 hours of postgraduate work for continued membership in the Academy may be gained from attendance at these programs. Physicians in an approximate radius of seventy-five miles of Fayette have received personal invitations to the entire series.

More than fifty physicians have located in out-state Missouri, that is, the part other than St. Louis County, Jackson County and St. Louis City, from January 1 to October 1 of this year.

## DEATHS

**Mycrs, Myron A., M.D.**, Glen Haven, Wisconsin, a graduate of the University of Wisconsin Medical School, 1939; honor member of the Jackson County Medical Society; retired; aged 34; died August 20.

**Davis, Phillips N., M.D.**, St. Louis, a graduate of the University of Vermont College of Medicine, 1918; member of the St. Louis County Medical Society; Fellow of the American Medical Association; aged 55; died August 29.

**St. Clair, Robert L., M.D.**, Kansas City, a graduate of Missouri Medical College, 1898; honor member of the Jackson County Medical Society; aged 75; died September 3.

**Thym, Herman H., M.D.**, Kansas City, a graduate of the Southwest School of Medicine and Hospital, 1910; member of the Jackson County Medical Society; Fellow of the American Medical Association; aged 62; died September 12.

## ORGANIZATION ACTIVITIES

### THE COUNCIL

The Council met at the Sheraton Hotel, St. Louis, on September 17, 18, 1949, with J. W. Thompson, M.D., St. Louis, Chairman, presiding. Those present were Drs. Donald M. Dowell Chillicothe; W. F. Francka, Hannibal; J. W. Thompson, St. Louis; Otto W. Koch, Clayton; J. F. Jolley, Mexico; R. W. Kennedy, Marshall; C. Edgar Virden, Kansas City; W. S. Sewell, Springfield; E. C. Bohrer, West Plains; Frank W. Hall, Cape Girardeau; Wallis Smith, Springfield; H. E. Peter-

sen, St. Joseph; W. A. Bloom, Fayette; C. E. Hyndman, St. Louis; R. E. Schlueter, St. Louis; A. N. Arneson, St. Louis; R. E. Duncan, Kansas City; F. T. H'Doubler, Springfield; Armand D. Fries, St. Louis; Mr. Lemoine Skinner, St. Louis; Mr. D. E. Caywood, Springfield; Mr. Ray McIntyre and Mr. T. R. O'Brien, St. Louis.

The minutes of the last meeting were approved.

### A. M. A. Interim Session

Mr. O'Brien reported that the St. Louis Convention Bureau had requested the Association to invite the A. M. A. to hold its Interim Session in 1951 in St. Louis. Upon motion of Dr. Bloom, it was voted that this invitation be extended the A. M. A.

### Southern Medical Association

Dr. Thompson reported that the St. Louis Medical Society had invited the Southern Medical Association to meet in St. Louis in 1950.

### United Mine Workers

Mr. O'Brien read a letter from the United Mine Workers of America asking if doctors would participate in their program under the welfare fund. This was referred to the Committee on Medical Economics.

### Boys Town

A letter was read from the chairman of the board of Boys Town asking that the Council approve Boys Town and asking permission to send a letter to doctors asking contributions for Boys Town. Upon motion of Dr. Sewell, Boys Town was approved and permission granted for a letter to go to members.

### Postgraduate Course for Technicians

A letter was read from Dr. A. P. Rowlette, Moberly, suggesting that a postgraduate program be given laboratory technicians, probably in connection with the Annual Session. Mr. McIntyre said that he had discussed this with Dr. Hollis Allen and that he favored the project. After discussion by Drs. Duncan and Petersen and upon motion by Dr. Dowell, it was suggested that the office contact Dr. Allen and ask his assistance in arranging a refresher course for technicians and, if possible, also arrange a program for office secretaries, in connection with the Annual Session.

### Morbidity Survey

A letter was read from Dr. Liveley of the Rural Sociology Department of the University asking cooperation, both in financing and in examinations, in a sample survey of morbidity among rural people in the state, the project to cover five years. After discussion by Mr. McIntyre and Dr. Kennedy, and upon motion of Dr. Bloom, this was referred to the Committee on Rural Medicine for further study.

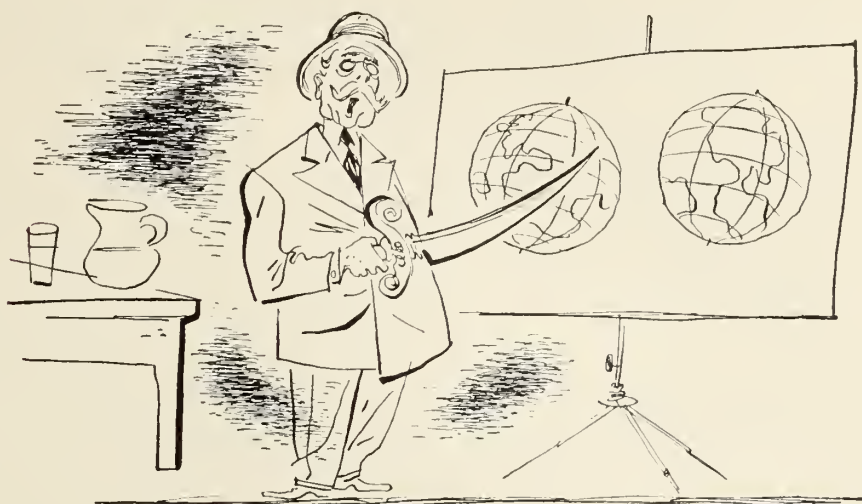
### Membership

A letter sent to Dr. Smith and Dr. Petersen was read presenting the problem of a member of Jackson County Medical Society moving his membership to a county in Kansas while still maintaining a practice in Missouri. Dr. Schlueter suggested that a ruling be obtained from the Judicial Council of the A. M. A. Upon motion of Dr. Petersen, it was decided that action should be taken according to the ruling given by the Judicial Council.

### Industrial Health

Mr. O'Brien reported that the Committee on Industrial Health would sponsor the presentation of a symposium on Industrial Health in the two schools in St. Louis and one in Kansas City beginning on October





## WORLD TRAVELER . . . Dietary Dub

Food customs? He can describe the bill of fare in far away places some people never heard of. His personal eating habits, however, are those of most men in public life—a feast when the hectic schedule permits, just a bite here and there between times.

And like innumerable others who will not or cannot eat properly, these are the half-well, half-sick cases you recognize as subclinical vitamin deficiencies. Your first move

in such cases is dietary reform, but when it comes to the right vitamin supplement, remember the name Abbott. In the complete Abbott line are single and multivitamin products . . . in

liquid, capsule and tablet form . . . for oral and parenteral use . . . for supplemental and therapeutic dosage. Your pharmacist can supply them in a variety of package sizes.

ABBOTT LABORATORIES, North Chicago, Illinois.



SPECIFY

## ABBOTT Vitamin Products

11. Dr. Vincent T. Williams, Kansas City, will serve as moderator, and speakers will be Dr. A. J. Lanza, New York; Dr. Harold A. Vonachen, Peoria; Dr. Dudley A. Irwin, Pittsburgh, and Dr. Max R. Burnell, Detroit. Upon motion of Dr. Virden, the Committee was authorized to spend up to \$550.00 on this program.

#### **Exhibit at State Fair**

Mr. McIntyre reported and showed a picture of the exhibit which the Association presented at the State Fair at Sedalia, September 21 through September 28. The report was received favorably and upon motion of Dr. Dowell, the office was instructed to look into the possibility of presenting exhibits at appropriate shows in the future.

#### **Annual Session Program**

Dr. Arneson gave a brief report on the program of the Annual Session, which will celebrate the 100th anniversary of the Association. He said that color television, sponsored by Smith, Kline & French, would be one of the features of the meeting, color television being presented for the first time in Missouri. Upon motion of Dr. Smith, Dr. Arneson was thanked for his work on the program and Councilors were requested to talk to members about the Session.

#### **Treasurer's Report**

Dr. Hyndman presented a financial statement and reported the financial condition of the Association as being satisfactory. Upon motion, his report was accepted.

#### **A. M. A. Assessment**

Mr. O'Brien reported that of 3,526 members, 2,204 had paid the A. M. A. Assessment. Councilors were given a report on their districts. Upon motion of Dr. Kennedy, it was decided that lists of members be sent to secretaries of county societies asking them to check on members who have not paid the assessment, whether they are able to pay or not, and to encourage those that are able to do so, to pay the assessment.

#### **American Cancer Society**

Dr. Virden reported briefly on the reorganization of Missouri Branch of the American Cancer Society, stating that they have a new executive secretary and that work is progressing. He said the society would like to place speakers on Councilor District meetings and reported on a meeting held at Moberly where the society furnished most of the speakers.

#### **Field Secretary's Report**

Mr. McIntyre reported on meetings held since the last meeting of the Council and gave dates of meetings that will be held in the near future. He also told of doctors who have located in Missouri in the last few months, giving locations as Houston, Clarksville, Glasgow, Mountain Grove, East Prairie, Stewartsville, Fairfax, LaPlata, Shelby, Monroe City, Jefferson City (3), Columbia (3), Valley Park, Farmington, Bethany, Charleston, Wright City, Ashland, Versailles, Flat River, Marshfield, Republic, Mountain View, Stanberry, Chillicothe, Centralia, Springfield (16).

#### **Handbook**

Dr. Petersen reported on the proposed content of the Handbook and suggested that it be prepared during this year but that distribution be held until the Annual Session as an added feature of the 100th Anniversary. Upon motion of Dr. Bloom, this was accepted.

#### **History of Association**

Dr. Schlueter reported on his work on writing the history of the Association, giving examples of how he was handling it. Dr. Smith expressed appreciation for the Council and upon motion of Dr. Virden, the work was approved and Dr. Schlueter was officially thanked.

#### **Legislation**

Mr. O'Brien reported briefly on state and national legislation, giving the information on the Audrain County Hospital suit and stating that Judge Sam Blair, Jefferson City, will hear the case and that a pretrial conference will be held on October 1. Mr. O'Brien stated that the Missouri House will meet on September 20 and the Senate will go into session on October 11. It is not known yet whether bills before the legislature will be considered or only revision legislation. The work of Dr. Lawrence in Washington was praised as well as Senators Donnell and Kem for their support.

#### **Public Relations**

The minutes of a meeting of the Committee on Public Policy on June 19 were read, in which a state set-up on public relations was outlined as follows: Each county society would have a committee of three, one named as chairman, these forming a district group; one member to be appointed by the Councilor from each Councilor District to be chairman of that district, with the Association Committee over all. Dr. Fries asked for an appropriation to call such a group together for a one day meeting. Upon motion of Dr. Sewell, such an appropriation was granted.

#### **Strip Film**

Mr. Skinner reported on his work on a strip film, which has been discussed at the previous Council meeting. Copies of the talk were presented to the Council. Mr. Skinner reported that he had been in touch with Whitaker and Baxter and that there was a good possibility that they would take over the production of the project. Suggestions were made by Councilors who had had opportunity to study one of the copies prior to the meeting, that it be brought out more strongly that socialized medicine is just one of the facets of statism. Upon motion of Dr. Smith, the work was approved in general and Mr. Skinner was instructed to continue with the work.

J. W. THOMPSON, Chairman.

#### **CLAY COUNTY MEDICAL SOCIETY WILL HOLD CLINICAL CONFERENCE**

The Clay County Medical Society will hold its second clinical conference at the Elms Hotel, Excelsior Springs, on November 3. The meeting will begin with a round table luncheon at 12:15 p. m. at which "Uses of Intravenous Procaine" will be presented by Milton C. Peterson, M.D., Kansas City, and "Short Anesthetics for Office Use" will be discussed by Louis Porter, M.D., Kansas City. J. E. Baird, M.D., Excelsior Springs, will preside.

Glenn Hendren, M.D., Liberty, will preside at the afternoon session when William Valk, M.D., Kansas City, Kansas, will speak on "Urology in General Practice"; Arthur E. Strauss, M.D., St. Louis, will talk on "Rheumatic Fever, Its Recognition and Care," and Oren Moore, M.D., Charlotte, North Carolina, will discuss "Backache in Women."

Following a dinner at 6:00 p. m., at which W. H.



about the **LARYNX,**  
 the **PHARYNX...**  
 and **CIGARETTES**

Here is the simple reason why many leading nose and throat specialists suggest  
**"Change to Philip Morris."\***

The sensitive tissues of the upper respiratory tract are often affected adversely by the irritants in the smoke of ordinary cigarettes.

Philip Morris, on the other hand, are specifically processed to *minimize* such irritants . . . the only one of all leading cigarettes to offer this advantage.

Why not give your patients the benefit of this proved\*\* superiority . . . why not suggest Philip Morris. Many leading doctors make it a point to say to their patients who smoke . . .  
**"Change to Philip Morris Cigarettes."**



Philip Morris & Co., Ltd., Inc.  
 119 Fifth Avenue, New York

**ARE YOU A PIPE SMOKER?** . . . We suggest an unusually fine new blend—COUNTRY DOCTOR PIPE MIXTURE. Made by the same process as used in the manufacture of Philip Morris Cigarettes.

*\*Completely documented evidence on file.*

*\*\*Reprints on request:*

*Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154; Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60; Proc. Soc. Exp. Biol. and Med., 1934, 32-241; N. Y. State Journ. Med., Vol. 35, 6-1-25, No. 11, 590-592.*

Goodson, M.D., Liberty, will preside, Oren Moore, M.D., Charlotte, North Carolina, will speak on "Management of Abnormal Presentation of Labor" and Arthur E. Strauss, M.D., St. Louis, will discuss "Hypertension."

## MISCELLANY

### A. M. A. INTERIM SESSION

Advance registrations and hotel reservations are now being received for the 1949 Clinical Session, the third annual midyear meeting of the A. M. A., to be held in Washington, December 6 to 9.

Attention to those details at this time will assure physicians a wide choice of hotel accommodations and will eliminate all delay in registering at the National Guard Armory upon arrival in Washington. Requests for reservations should be made before November 9 and sent to the Chairman of the Subcommittee on Hotels, American Medical Association, Hotel Reservation Bureau, Star Building, Washington 4, D. C.

The Clinical Session will provide a full scale scientific program specifically designed for the general practitioner. Outstanding physicians will discuss such subjects as diabetes, pediatrics, laboratory diagnosis, physical medicine and rehabilitation, arthritis, dermatology, x-ray diagnosis, cancer, poliomyelitis and other topics.

Typical of the complete coverage which will be given medicine in the fields in which the general practitioner is interested is the program covering pediatrics. In sessions beginning on the afternoon of December 6 and continuing through the morning of December 9, approximately thirty-five papers will be presented by leading specialists from all parts of the country.

In another section, about the same number of papers will deal with the problems of delivery alone. More than twenty physicians will present their findings and views on diabetes.

One of the features of the section dealing with arthritis will be a report on the present status of cortisone and ACTH, two compounds which have opened new approaches to the treatment of rheumatoid arthritis.

Coordinated with this outstanding scientific program will be approximately 100 scientific exhibits which will present original work on the subjects discussed.

The newest offerings of 125 manufacturing firms will comprise the Technical Exposition. There will be found the latest developments in scientific medical research, drugs and equipment.

The clinical sessions and the exhibits will be held in the National Guard Armory, Capitol Avenue and East 19th Street. The exhibit hall will be open throughout the meeting, 8:30 a. m. to 6 p. m.

Televised surgical and clinical procedures, similar to those shown in color at the A. M. A. annual session in Atlantic City last June, will be presented at the Washington meeting. The demonstrations will originate in the Johns Hopkins Hospital and will be shown on screens in the armory. The television schedule will be spread over four days.

The House of Delegates will meet at the Hotel Statler during this session. One of the first orders of business will be the annual selection of the general practitioner who has made an exceptional service contribution to his community. A gold medal will go with the honor.

An entertainment program for attending doctors and their wives is being developed. The highlight of this will be on Wednesday evening, December 7, when

Philip Morris will originate its "This Is Your Life" broadcast from the Hotel Statler. The radio program will be followed by a stage show in which outstanding stars will participate.

For the convenience of doctors making advance registrations and reservations, *The Journal of the American Medical Association* is publishing in its advertising section every week, convenient hotel reservation and advance registration blanks. Listed also are the leading hotels and their rates.

### ARMY NEEDS MEDICAL OFFICERS IN JAPAN

The Department of the Army is urgently in need of Medical Officers to serve in a civilian capacity with the occupation forces in Japan. These positions, which involve the performance of the various duties of a general practitioner on an Army Hospital staff, offer an opportunity for broad experience.

Minimum acceptable qualification requirements are a degree in medicine plus five years of progressive professional experience, which includes one year of rotating internship in an accredited hospital. Service on active duty with Army, Navy or Veterans Administration may be substituted for the required internship.

The salary for these positions is \$6,235.20 per year plus 10 per cent post differential with quarters provided at no cost to the employee. Individuals selected for appointment must agree to remain a minimum of two years. Transportation is furnished to and from Japan. Dependents may join the employee in approximately eight to ten months after his arrival in the command.

Application should be made on Civil Service Commission Standard Form 57 which can be obtained at any Class A Post Office, and sent to the Department of the Army, Office Secretary of the Army, Civilian Personnel Division, 1660 E. Hyde Park Blvd., Chicago 15, Illinois.

### TELEVISION MAY HELP PROTECT EYESIGHT

Watching television may cause people to receive needed eye care more promptly, according to Benjamin Rones, M.D., Washington, D. C., oculist, in the current issue of the *Sight-Saving Review*.

"Every ophthalmologist has complaints that after watching a television program for an evening the patient, or his children, complain loudly and frequently about pain in the eyes," says Dr. Rones. "The frequency of these complaints justifies examining the contributing factors to see if they cannot be minimized and greater ocular comfort achieved. The clarity of the image on the screen is of primary importance. Since the strength of the received signal is, in general, inversely proportional to the distance of the receiver from the sending station, it naturally follows that receiving sets placed beyond the normal service area of the station will not receive a good signal, and consequently the screen picture is 'grainy' and indistinct and conducive to ocular fatigue. Therefore, stations should only be tuned in that afford a powerful enough signal to give a clear-cut image.

"The illumination of the room should not afford too great a contrast between the background and the screen. With the proper daylight screens it is not necessary to keep the room dark in order to obtain a clear image on the screen. The constant shifting of the eye from a bright to a dark background causes considerably more work in the pupil-regulating musculature





A complete line for clinical laboratories devoted to all branches of chemistry, bacteriology, hematology, and parasitology. Tested and checked in our own clinical laboratories. Purity warranted. Our facilities assure prompt shipment of large or small orders. Inquiries invited.

## COMPLETE CATALOG

Reagents catalogued alphabetically—also according to subjects and techniques; plus medical reference guide. Catalog comprises full line blood testing sera including anti-Rh, anti-M and anti-N; also reagents for Wassermann, Kline, and Kahn tests. Write for your copy. FREE ON REQUEST.



**GRADWOHL**  
LABORATORIES

R. B. H. Gradwohl, M. D., Director  
3514 Lucas Av. St. Louis, Mo.

## CONSTANT RESEARCH



Invented in 1861, Hanger Artificial Limbs have been constantly improved over the years. Today, the Hanger Leg is recognized as one of the world's finest artificial limbs.

Hanger Research is continually developing and testing new ideas, new methods, and new materials. From these efforts have come many outstanding achievements, adding greatly to the comfort and to the ever-increasing utility of the limb. Hip control, dural light construction, natural action joints, the flexible foot, are a few of the many advancements of recent years.

The many Hanger companies in many key cities throughout the United States are constantly studying, planning, and developing new improvements to give you an ever better artificial limb.

**HANGER** ARTIFICIAL LIMBS

1912-14 Olive Street  
St. Louis 3, Missouri

## Your Membership in SOUTHERN MEDICAL ASSOCIATION IS VALUABLE



The Campbell-Kenton County Medical Society of Kentucky is the host Society. It is a Kentucky meeting.

### THE VALUE OF MEMBERSHIP IN MEDICAL ASSOCIATIONS AND ATTENDANCE AT MEDICAL MEETINGS

SUCCESS, whether measured by achievement, confidence gained, or by monetary standards, comes largely through achievement and maintenance of competence. A physician, like persons engaged in other fields of endeavor, must keep abreast of the latest developments and methods in his field in order to maintain competence.

THE SOUTHERN MEDICAL ASSOCIATION was founded in 1906 for the purpose of developing and fostering scientific medicine and surgery in the South and in its forty-three years of existence has never deviated from this objective. Through attending the annual meetings of the Southern Medical Association and by reading The Southern Medical Journal, thousands of physicians of the South are taking an important step toward achieving and maintaining their competence in the constantly changing field of medicine.

REGARDLESS of what any physician may be interested in, regardless of how general or how limited his interest, there is always a program at the meeting and articles in the Journal to challenge that interest.

THE MEETING this year will be composed of thirty-two sessions of the twenty-one sections, two General Clinical Sessions and two conjoint meetings. Eligible members of state and county medical societies in the South should be and can be members of the Southern Medical Association. The annual dues of \$5.00 include the Southern Medical Journal, a journal that should be a "must" on every physician's reading list.

SOUTHERN MEDICAL ASSOCIATION  
Empire Building  
BIRMINGHAM 3, ALABAMA

than occurs when the background is partially illuminated, and therefore quicker fatigue.

"If the instrument is to be placed in a large room and used to entertain the children and their friends, then a large screen is desirable. However, if only two or three people expect to view it in a smaller room, then a smaller screen will offer a more clear-cut and satisfactory image. No matter what size screen is used, it is not necessary for the person with good vision to get close to the instrument; and if this is the only way he can see the image, then it is wise for him to have his eyes examined for he is not seeing properly. It is also more comfortable to view the screen from directly in front, for there is considerable distortion when the angle of observation is too great.

"If it is desired or necessary to spend a prolonged time in the observation of the television screen, it is advisable to break the fixation by shifting the gaze away from the screen at fairly frequent intervals.

"It may eventuate that the fatigue induced by television may be a sight conservation boon, for it will cause the individual to seek medical attention earlier and, in a number of cases, allow serious eye diseases to be discovered at a more favorable time than would otherwise be the case."

## TUBERCULOSIS ABSTRACTS

*Issued Monthly by the National Tuberculosis Association*

### A CRITICAL ANALYSIS OF ASEPTIC TECHNIC FOR TUBERCULOSIS

*The Essentials of Asepsis*

"Aseptic technic" is a routine for protecting the contacts of tuberculous patients. It consists of a number of logical methods to prevent the spread of infection which are applied to the patient, to his contacts, and to his environment. It involves facilities for isolation, placement of the patient and care of the patient. According to the circumstances, the routine may be limited to a few obvious essentials, or include a complete list of all possible methods.

The usual source of infectious material is the respiratory tract. Contamination may occur in three ways—direct, by contact with the patient; indirect, by the handling of contaminated materials, and air-borne. The newer analyses of air-borne transmissions have shown that bacilli may travel by: droplets, larger than 0.2 mm., which quickly clear from the air by gravity; droplet nuclei, less than 0.1 mm., which quickly evaporate, continue to float, and are a dangerous cause of infection; and dust which may contain dried droplets.

Isolation technic is not the only means for control of tuberculosis in general hospitals. Other approaches include routine chest x-ray examinations of all patients and personnel to uncover all active cases of tuberculosis and the provision of facilities for the care and isolation of cases of tuberculosis when found.

#### Principles of Protection

The ways to avoid contamination are to reduce the number of bacilli expelled by the patient, to reduce contact between attendants and patients and to apply a routine of aseptic precautions. One must plan to: immobilize the bacilli near their source, collect the secretions, protect the contacts and cleanse the environment by appropriate means.

Education and training must reach not only the

patient and his visitors but the staff and all employed personnel in the hospital whose duties bring them into contact with the patient or with material contaminated by his secretions. A detailed routine must be arranged for their care and protection, and carried out without deviation.

#### Excessive Hazards

There are a number of places in a precautionary routine where the hazard of contamination or the chance of nonobservance is greater than others. In part these hazards are due to the nature of illness, but in part to human failings. They include: lapses in self-care by the patient, personnel, or visitors, and the uncovered cough, sneezing, laughing, talking and throat-clearing.

Some of the hazards are relatively unimportant, but a few of them represent notable flaws or weak spots. The habits of the patient are probably the most important factor in an aseptic routine. The patient must understand the theory of contamination; he must be willing to help; he is responsible for catching the bacilli near their source and disposing of them; he must practice the methods until habits are formed; and the habits must be constant and invariable.

The respiratory tract of persons in contact with the patient must be considered exceptionally vulnerable. Since attendants must care for the patient and also must breathe, the entry of bacilli should be prevented by all possible means. The correct wearing of masks, and their construction and composition, are of utmost importance.

The uncertain value of several antiseptics and methods is a weak spot in the technic. Among the antiseptics only the alcohols, cresols and formaldehyde have any appreciable effect on the tubercle bacillus, and only the first two are practical. The value of cresol compounds is at present a matter of dispute. They are being tested by modern methods in order to determine their efficiency and limitations.

Whether soap is simply an aid to ablation or is bacteriostatic is not known. Detergents (including soaps) are used for cleaning of rooms, yet they are not considered to be antiseptic for tubercle bacilli by authorities. Hand washing is a standby in aseptic technic. In the washing of clothes, soap acts only as a remover of dirt. Sterilization depends upon the recurrent exposure of white clothes to temperatures above 140 F. for a total of at least thirty to forty minutes. This formula is generally used in standard laundry practice.

Vacuum cleaners have recently been suggested for cleaning rooms containing tuberculous patients but have not been sufficiently tested for efficiency.

Face masks have not been completely studied. They have two uses—for the patient and for the person in contact. Masking of those in intimate contact with patients is necessary, especially when they are grossly infectious, liable to cough or careless.

The disinfecting value of ultraviolet light is in dispute, chiefly due to the variation in sources, intensities and the quality of contaminated surfaces.

#### New and Valuable Methods

Several methods and materials have only recently been proved valuable and put into use. The use of oil to reduce the dust, and the use of alcohol as a skin antiseptic are the most notable. Certain "odorless cresols" (which actually are phenols) have shown promise and are being tested.

#### Summary and Conclusions

The majority of protective methods and materials



# Antibiotics

For the past several years, *Lederle* has conducted extensive research in the production and isolation of antibiotics. Scientific competition in this field has been keen and *Lederle* leadership has been achieved at the expense of a heavy investment in personnel, materials and money. Two antibiotics are widely used throughout the world—aureomycin and penicillin. The former is produced solely by *Lederle*. Penicillin in many new forms, both oral and parenteral, has been pioneered by *Lederle*.



*Lederle* research never comes to a standstill, but on the contrary, proceeds apace; and will in due course produce many additional weapons for man's fight against parasitic microorganisms.

# WHEN OBESITY IS A PROBLEM



**S. H. CAMP and COMPANY**  
JACKSON, MICHIGAN

*World's Largest Manufacturers  
of Scientific Supports*

Offices in New York • Chicago  
Windsor, Ontario • London, England

Clinicians have long noted that the forward bulk of the heavy abdomen with its fat-laden wall moves the center of gravity forward. As the patient tries to balance the load, the lumbar and cervical curves of the spine are increased, the head is carried forward and the shoulders become rounded. Often there is associated visceroptosis. Camp Supports have a long history among clinicians for their efficacy in supporting the pendulous abdomen. The highly specialized designs and the unique Camp system of controlled adjustment help steady the pelvis and hold the viscera upward and backward. There is no constriction of the abdomen, and effective support is given to the spine. Physicians may rely on the Camp-trained fitter for precise execution of all instructions.

If you do not have a copy of the Camp "Reference Book for Physicians and Surgeons", it will be sent on request.



THIS EMBLEM is displayed only by reliable merchants in your community. Camp Scientific Supports are never sold by door-to-door canvassers. Prices are based on intrinsic value. Regular technical and ethical training of Camp fitters insures precise and conscientious attention to your recommendations.



are good. They are logical, efficient and can be applied easily. There are several valuable new procedures. A limited and incomplete application is the greatest deficiency which has been noted. A correction should not wait until perfection of the precautions; it should be made now, in every hospital and sanatorium, and pushed to wide usage in the care of patients at home.

A Critical Analysis of Aseptic Technic for Tuberculosis. William H. Oatway, Jr., M.D., Arizona Medicine, May, 1949.

## SOCIETY PROCEEDINGS

### FOURTH COUNCILOR DISTRICT

OTTO W. KOCH, CLAYTON, COUNCILOR

St. Louis County Medical Society

The St. Louis County Medical Society held its regular meeting on October 12, at 8:30 p. m. in the Health Center, St. Louis County Hospital.

Dr. Richard Sutter, chairman of the industrial health committee, reported on the industrial health meeting held at St. Louis and Washington university medical schools and at the St. Louis Medical Society on October 11.

Dr. Nakada, chairman of the radio committee, reported that Station KXLW was discontinuing the society radio programs because of insufficient personal interest by members of the society. Dr. Nakada and Dr. Schattyn emphasized some of the technical difficulties in preparation and delivery of the programs. It was decided to present a summary of the problem in the *Bulletin* together with a request for preparation of papers by the members.

Dr. Koch, Councilor, presented a summary of the recent Council meeting.

Dr. Sutter moved that Dr. N. S. Vitale and the members of his committee be given a rising vote of thanks for their excellent work in planning the picnic meeting on September 18.

On motion of Dr. E. R. Brown, the revision of the constitution and by-laws was referred back to the committee for correction and review. Dr. Brown was appointed an additional member of the committee.

On motion of Dr. Spitzer, the problem of swimming pool sanitation was referred to the committee on health and public policy.

On motion of Dr. Koch, the president was authorized to appoint a committee to investigate the purchase of a 16 mm. projector, or other suitable gift, from the society to the St. Louis County Hospital.

Dr. Meador introduced the following applicants for membership: Drs. Pearl Ulett, George Ulett, Richard Kohle, John Martz, J. H. Walton.

Stanley Harrison, M.D., St. Louis, spoke on "Care of the Premature Infant," emphasizing important considerations in immediate postdelivery nursing care, the use and abuse of stimulants and dietary and growth factors. The paper was discussed by Drs. Martz, Vitale, Finley and O'Connell.

ROBERT C. KINGSLAND, M.D., Secretary.

### TENTH COUNCILOR DISTRICT

FRANK W. HALL, CAPE GIRARDEAU, COUNCILOR

Forty-two physicians attended an evening dinner meeting of the Tenth Councilor District at the Rustic Inn, Sikeston, on October 3. The Scott County Medical Society was host at an enjoyable social hour prior to the meeting.

The scientific program was presented by R. O. Muether, M.D., and William A. Knight, Jr., M.D., St. Louis. They discussed in practical fashion the subject "Chronic Recurrent Pancreatitis" and presented results of recent research work they have done on this particular subject.

A number of those attending the meeting arrived early and were shown through the new Delta Community Hospital.

Physicians from outside the district, other than the guest speakers, who attended were Otto W. Koch, M.D., Clayton, and C. P. Dyer, M.D., St. Louis.

FRANK W. HALL, M.D., Councilor.

### St. Francois-Iron-Madison-Washington-Reynolds Counties Medical Society

The regular meeting of the St. Francois-Iron-Madison-Washington-Reynolds Counties Medical Society was held at 8:00 p. m., September 29, at State Hospital No. 4, Farmington.

Robert Dean Mattis, M.D., St. Louis, spoke on "Common Eye Conditions of Interest to the General Practitioner."

The program was followed by a short business session.

Members present were: Drs. P. L. Jones, C. H. Appleberry and Byron Taylor, Flat River; H. M. Roebber and M. T. Haw, Jr., Bonne Terre; Dailey Appleberry, Rivermines; H. C. Graebe, Desloge; W. H. Barron and M. Grossman, Fredericktown; G. L. Watkins, Sr., G. L. Watkins, Jr., E. F. Hoctor, E. R. Crouch, and James J. Stout, Farmington; J. R. Pirtle, Centerville, and A. F. Bugg, Ellington.

The Woman's Auxiliary met at the same time and place.

MARVIN T. HAW, JR., M.D., Secretary.

## BOOK REVIEWS

DOCTOR TALKS TO TEEN-AGERS, A, A Psychiatrist's Advice to Youth. By William S. Sadler, M.D., Chicago, Consulting Psychiatrist, Columbus Hospital. C. V. Mosby Company. St. Louis. 1948. Price \$4.00

This is a book of slightly over three hundred fifty pages, divided into twenty-five chapters, addressed to "Teen-Agers" and covering personality types, emotional conflicts, home and other social relationships, health, education, vocational choice, sex, courtship, marriage and religion. An appendix is taken from the author's book "Modern Psychiatry," which groups human emotion under the following six master urges: (1) the life urge, (2) the play urge, (3) the social urge, (4) the sex urge, (5) the workshop urge and, (6) the sense of humor.

The book is loosely organized and contains some factual matter such as the demand for certain profession, and the status of medical therapy, which can quickly become outdated. Taken a few chapters at a time, this work is interesting reading. The author has a nice sense of humor. "Religion and humor are exclusively human attributes, though I must confess I am constantly meeting folks who do not seem to be liberally endowed with either of them." Statements like the following would seem to be of practical benefit: "Despondent people are nearly always shallow breathers. Shallow breathing and worry nearly always

go together. Getting rid of one often helps in overcoming the other."

The training and experience of the author is reflected in an intelligent, clearly presented, well informed and sympathetic discussion. The advice is sound and the book is excellent reading matter not only for "Teen-Agers," but for their parents and teachers as well. M.M.

**HUMAN BIOCHEMISTRY.** By Israel S. Kleiner, Ph.D., Professor of Biochemistry and Director of the Department of Physiology and Biochemistry, New York Medical College, Flower and Fifth Avenue Hospitals. With Seventy-seven Text Illustrations and Five Color Plates. Second Edition. C. V. Mosby Company, St. Louis. 1948. Price \$7.00.

The author is to be congratulated on his production of a biochemistry textbook that is so easily and enjoyably read. He has accomplished that desirable feat of presenting biochemistry as a vital basis of clinical medicine. The volume is relatively small and the print is large; the paper is of an excellent quality. Figures, diagrams and structural representations are used liberally. No phase of classical biochemistry is neglected; the general effect is that of a concise presentation of the established current knowledge, with the deletion of detailed discussion of those phases which are at present controversial. This in no way detracts from the completeness of the presentation or of the value of the book to both student and practitioner. C.J.S.

**BUSINESS SIDE OF MEDICAL PRACTICE, THE.** By Theodore Wiprud, Executive Director and Secretary of The Medical Society of the District of Columbia and Managing Editor of the Medical Annals of the District of Columbia. Second Edition Illustrated. W. B. Saunders Company. Philadelphia & London. 1949. Price \$3.50.

Probably every young physician and many older ones have yearned for a good guide to "The Business Side Of Medical Practice." This little book, now in its second edition, is of considerable help in suggesting proper and better ways to manage the business of practice.

There are twenty chapters which discuss "Personal Efficiency," "Building a Private Practice," and such diverse things as office and financial records, "Relations with the Press," and "Group Practice." The book contains considerable information which is well presented, but it produces no formula which will guarantee to solve all business troubles and bring wealth without work.

In view of the pending furor of government medicine, one wonders if there will be a third edition of this book, for the doctor of the future may have no business problems—only political ones. At any rate this second edition is well worth reading. R.W.P.

**HANDBOOK OF DISEASES OF THE SKIN.** By Richard L. Sutton, M.D., Emeritus Professor of Dermatology and Syphilology, University of Kansas Medical School; and Richard L. Sutton, Jr., M.D., Associate Professor of Dermatology and Syphilology, University of Kansas Medical School. With 1057 Illustrations. C. V. Mosby Company. St. Louis. 1949. Price \$12.50.

This textbook is a worthy successor to the popular textbook entitled "Introduction to Dermatology" by

the same authors and covers much the same material as its predecessor. However, the book is smaller in size because of efficient condensation and use of small type for much of the presentation without detracting from readability.

Many more photographs and microphotographs have been added which add immeasurably to any dermatology text. This should appeal to the general practitioner although the book, as a whole, may be somewhat advanced for the average reader. It is an invaluable reference for the graduate student and specialist in dermatology.

The latest in treatment and diagnosis is incorporated. The reviewer particularly calls attention to the presentation of allergic dermatoses and the excellent chapters on metabolic disorders (including a most comprehensive review of light dermatoses) and the psychosomatic dermatoses.

**NUTRITION AND DIET IN HEALTH AND DISEASE.** By James S. McLester, M.D., Professor of Medicine, University of Alabama, Birmingham. Fifth Edition. W. B. Saunders Company. Philadelphia & London. 1949. Price \$9.00.

"One cup of coffee or tea a day is possibly all right; more than this is probably harmful." In this single sentence McLester expresses an opinion concerning the damaging influence of these widely used beverages. Whether the reader chooses to agree or disagree with this sententious pronouncement, it illustrates the directness of approach to be found in the new fifth edition of the author's classic treatise on nutrition.

The basic facts having to do with dietary essentials are presented, sometimes robbed of none of their complexity in the retelling. The fundamental bases of metabolic processes are delineated. The characteristics of an optimal diet are contrasted with the components of that diet which will at least sustain life. Upon this sound under-structure the special modifications which are necessary to meet the metabolic or anatomic alterations induced by disease are developed. Specific diet lists are included in generous number so that no physician need be at a loss to prescribe an optimally nutritious diet for any patient who consults him.

B.Y.G.

**PSYCHODYNAMICS AND THE ALLERGIC PATIENT.** By Harold A. Abramson, M.D., Associate Physician for Allergy, The Mount Sinai Hospital, New York, N. Y.; Consulting Physician, for Allergy, Sea View Hospital, Staten Island, New York.; Assistant Professor of Physiology, Columbia University, New York, N. Y. Panel discussion: Rudolph L. Baer, M.D., Ethan Allan Brown, M.D., Hal M. Davidson, M.D., O. Sprugeon English, M.D., Frank Fremont-Smith, M.D., J. A. Millt, M.D., M. Murray Peshkin, M.D., Homer E. Prince, M.D., Sandor Rado, M.D., Edward Weiss, M.D. An official publication of the American College of Allergists. The Bruce Publishing Company. St. Paul and Minneapolis. 1948.

This eighty-one page book, which is an official publication of the American College of Allergists, has as its basis a meeting of allergists and psychiatrists held in Atlantic City in June 1947. The first section discusses the historic aspects. These factors, occurring before 1900, illustrate the confusion that existed without the fundamental knowledge of immunology and psychodynamics.

The next section deals with the relationship of psy-





## if she is one of your patients...

...She depends on your help for a speedy return to gainful occupation. Women seeking employment who are nervous, apprehensive and generally distressed by symptoms of the climacteric, may find it difficult to meet competition. "Premarin" offers a solution. Many thousand physicians prescribe this naturally-occurring, oral estrogen because...

1. Prompt symptomatic improvement usually follows therapy.
2. Untoward side-effects are seldom noted.
3. The sense of well-being so frequently reported tends to quickly restore the patient's confidence and normal efficiency.
4. This "Plus" (the sense of well-being enjoyed by the patient) is conducive to a highly satisfactory patient-doctor relationship.
5. Four potencies provide flexibility of dosage: 2.5 mg., 1.25 mg., 0.625 mg. and 0.3 mg. tablets; also in liquid form, 0.625 mg. in each 4 cc. (1 teaspoonful).



While sodium estrane sulfate is the principal estrogen in "Premarin," other equine estrogens...estradiol, equilin, equilenin, hippulin...are probably also present in varying amounts as water-soluble conjugates.

# "PREMARIN"



ESTROGENIC SUBSTANCES (WATER-SOLUBLE)  
also known as CONJUGATED ESTROGENS (equine)

chomotic medicine and allergy, with many case histories to illustrate the points discussed.

The third and last section is a summary of the panel discussion at the Atlantic City meeting. The various allergists and psychiatrists try to find a common ground in their different approaches to the handling of allergic patients.

Throughout the entire book there is emphasis upon the tremendous influence of psychic factors upon the allergic symptomatology.

The book is well written. It avoids more than a fundamental discussion of either allergic immunology or psychotherapeutics. Anyone handling allergic patients would profit by reading it.

A.C.C.

THE 1946 YEARBOOK OF ENDOCRINOLOGY, METABOLISM AND NUTRITION. Endocrinology, edited by Willard O. Thompson, M.D., Clinical Professor of Medicine, University of Illinois College of Medicine; Attending Physician (Senior Staff), Henrotin Hospital; Attending Physician, Grant Hospital of Chicago. Metabolism and Nutrition, edited by Tom. D. Spies, M.D., Associate Professor of Medicine, University of Cincinnati School of Medicine; Director, Nutrition Clinic, Hillman Hospital, Birmingham, Alabama. Chicago: The Year Book Publishers Incorporated. 1947. Price \$3.75.

Typical of the Year Book series since their inception, this volume comprises excellent résumés of the articles offering significant contributions during the year to those fields covered in the title. Both to the busy practitioner and to the specialist in the subjects mentioned, the volume should offer an invaluable reference work. An excellent attempt is made to keep pace with the rapid advance in these fields. The reader also is afforded many timely and pertinent criticisms of the articles by the well-informed editorial staff.

P.L.B.

PRACTICAL CHILD GUIDANCE AND MENTAL HYGIENE, By Samuel Kahn, M.D.; Adjunct Professor of Psychology and Psychiatry at Long Island University; Chief Psychiatrist, New Jersey and Delaware Induction Boards for the United States Army; author of *Sing Sing Criminals*, *Mentality and Homosexuality*, *How to Study*, *How to Learn and Advance*, *Psychological and Neurological Definitions*, *Suggestion and Hypnosis Made Practical*, etc.; Grace Kirsten, A.B., formerly with the New York City Department of Education and Lecturer on Child Guidance; May Elish March, A.B., M.A., formerly a teacher in the New York City High Schools. Meador Publishing Company. Boston. 1947. Price \$4.00.

In accord with the current emphasis of mental hygiene and the impetus being given to its role in adequate adjustment in social living, *"Practical Child Guidance and Mental Hygiene"* deals with the most fundamental issue, that of proper guidance of the child. The book is correctly focused on the role of parenthood in the development of mental health and consequent adjustment of their children. It shows both the desirable positive and unfortunate negative relationships between the parents and the child and the effectual behavior produced during childhood as well as the characteristic behavior patterns that will likely result in adulthood. It discusses the value of recognition and encouragement, the effects of overprotection and underprotection or unreasonable demanding of the child, and the cause and symptoms of negativity in the child's personality.

While the book is based on sound psychological principles, it is presented in a simple, easily understood manner with the primary purpose of giving to the average parent applicable knowledge in guidance and ways to meet and correct behavior problems of their children that may exist at the present time. The material is presented therefore in question and answer form classified under the general problems that occur in raising children. The questions were obtained principally from parents themselves who have presented their problems. The authors encourage further interrogation by the parents who use this book if the presented material was not pertinent to their individual problems.

This book is particularly recommended reading for parents who do not have a knowledge of Psychological principles in the guidance of their children or the realization of the importance of parenthood in this role.

D.W.M.

SYMPOSIA ON NUTRITION of the Robert Gould Research Foundation. Volume I. Nutritional Anemia. Edited by Arthur Lejwa. The Robert Gould Research Foundation, Inc., Cincinnati, Ohio. 1948.

This volume presents a group of eleven scientific papers presented at a symposium organized by the Robert Gould Research Foundation under the auspices of the College of Medicine of the University of Cincinnati. No group of writings will serve better to make the reader realize that he must no longer be content to classify his patient with anemia as having either "primary" or "secondary" anemia. No longer must he be content with either iron or liver as his therapeutic tools. The presentations by excellent workers in the field serve to acquaint the reader with many of the rapidly advancing ramifications in the hematologic realm. Advance leads to a better understanding of all the building blocks essential to an efficient "erythron," each with a practical implication for the anemic patient and his pocketbook. With advance in understanding of the nutritional anemias, specific medication becomes easier, and "shot gun" treatment outmoded. The reader will be presented with a host of possible etiologic defects in his anemic patient, all discussed in an excellent fashion.

P.L.B.

CARE OF THE SURGICAL PATIENT, Including Pathologic Physiology and Principles of Diagnosis and Treatment. By Jacob Fine, M.D., Surgeon-in-Chief, Beth Israel Hospital; Professor of Surgery at Beth Israel Hospital, Harvard Medical School. W. B. Saunders Company. Philadelphia-London. 1949. Price \$8.00

The purpose of this book is to serve as a guide for the care of the surgical patient as a whole, and not only the surgical condition of the patient. The author has done this by presenting a synopsis of the pathologic physiology, diagnosis, treatment of surgical conditions and allied conditions and complications.

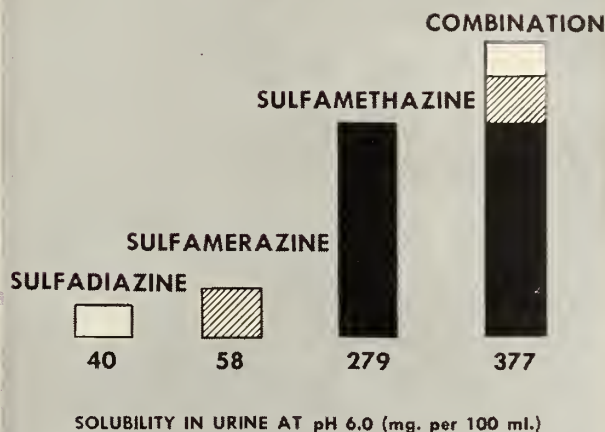
The text and references comprise 517 pages which are divided into six major sections. Section I deals with "General Considerations"; Section II, "Regional and Special Surgery"; Section III, "Endocrine Diseases and Hormone Therapy"; Section IV, "Coincidental Diseases in Surgical Patients"; Section V, "Clinical and Laboratory Methodology"; and Section VI, "General Preoperative and Postoperative Care." Quite a number of his colleagues assisted Dr. Fine in the writing of



# INCREASED MARGIN OF SAFETY — A ***NEW*** IMPROVED TRIPLE-SULFA COMBINATION

## TRISULFAZINE

TRADEMARK



*Sulfamethazine plus sulfadiazine plus sulfamerazine provides a new, effective triple-sulfonamide combination that presents a minimal hazard of toxic reactions—particularly crystalluria.*

Sulfamethazine "... can be considered to be a real advance, more especially as its therapeutic activity is of the same order as the parent compound, sulphadiazine."<sup>1</sup>

<sup>1</sup> Whitby, L.: Practitioner 155: 264 (1945).



**FEATURES** • *Low toxicity*—reduced danger of crystalluria • *Potency*—intensive dosages feasible • *Simplicity and convenience*—reduced need for adjuvant alkali or fluid administration • *Prolonged action*—because of sustained blood levels • *Rapid effect*—components of the mixture pass quickly into tissue fluids.

**Available in three convenient dosage forms:** Tablets: 0.166 Gm. each sulfonamide per 0.5-Gm. tablet. *Palatabs*\* (Half Strength): 0.083 Gm. each sulfonamide per 0.25-Gm. peppermint-flavored *Palatab*. *Suspension with Sodium Lactate*: 1 Gm. each sulfonamide (microcrystalline) per fluidounce with 3 Gm. sodium lactate; in stable, agreeably flavored vehicle.

\*Trademark of The Central Pharmacal Co.

### THE CENTRAL PHARMACAL COMPANY

*Pharmaceutical Progress Since 1904*

SEYMOUR . . . . . INDIANA



this book. So many subjects are covered that, of necessity, none are presented in detail.

This book can be recommended as profitable reading to students and graduates both, especially the doctor in general practice who does some surgery. S. V.

**GERIATRIC MEDICINE, The Care of the Aging and the Aged**, edited by Edward J. Stieglitz, M.S., M.D., F.A.C.P., Attending Internist, Suburban Hospital, Bethesda, Maryland, (Chairman Staff, 1945-47); Doctor's Hospital, Washington, D.C.; Attending internist (Geriatrics), Chestnut Lodge, Rockville, Maryland; Consulting Internist, Washington Home for Incurables; Associate, Washington School of Psychiatry; Special Lecturer, Institute of Industrial Medicine, New York University, Bellevue Postgraduate Medical School, New York City; Formerly Associate Clinical Professor of Medicine, Rush Medical College, the University of Chicago. Washington, D.C. Second Edition, Illustrated. W. B. Saunders Company. Philadelphia-London. 1949. Price \$12.00.

This book edited by Stieglitz is one of great value. His three chapters, "Foundations of Geriatric Medicine," "Principles of Geriatric Medicine," and "Medical Care of Normal Senescents" are of tremendous value and should be read by all members of the medical profession.

The other chapters are written by eminent specialists, forty of them, covering the entire field of medicine and surgery. Thus, all the problems of geriatrics are presented; those that are solved and those that remain unsolved.

The book should be in the library of all specialists as well as the general practitioner. It is especially arranged for quick reference to any subject related to geriatrics. H. W. S.

**MEDICINE OF THE YEAR.** Editorial Direction by John B. Youmans, M.D., Dean, College of Medicine, University of Illinois. J. B. Lippincott Co., Philadelphia, London, Montreal. 1949. Price \$5.00.

With a distinguished roster of contributors this book of 143 pages attempts to bring one up to date on the progress of medicine as of 1948. In some respects it is like a visit to a fashion salon, for much that is vogue today will be discarded tomorrow.

For convenience the material has been grouped under internal medicine, surgery, obstetrics, gynecology and pediatrics, and these sections are marked by a finger index. In addition each section is introduced by a long paragraph summary in bold faced type with an evaluation of the important progress of the year.

In general the book is well written and should prove of interest to every physician who is trying to keep abreast of the progress of medicine. B. W. P.

**SKIN PROBLEM FACING YOUNG MEN AND WOMEN, THE**, by Herbert Lawrence, M.D., Diplomate, American Board of Dermatology. 1948. Timely Publications—San Francisco. \$1.50.

This short pamphlet is intended for the lay public, particularly that portion indicated in the title. It is well written and easily readable, with few medical terms and those usually self explanatory or explained in simple terms. The author attempts to clear up many of the misunderstandings and misconceptions which

the physician has to treat in the mind of each individual acne case.

The pamphlet explains the etiology, physiology and treatment of acne to the public in a logical manner, but there are several points which may be misleading to the lay reader. For example, the author states categorically "you can not catch dandruff from someone who has it." Dandruff may be acquired by a susceptible individual by direct contact, hairdressers and barbers. Also, direct expression of comedones by the patient, even though aided by a comedone extractor, is not allowable by most dermatologists (this is an office procedure.)

As a whole, the pamphlet should prove enlightening to those interested in this problem. J. M. G.

**ATLAS OF ROENTGENOGRAPHIC POSITIONS.** By Vinita Merrill, While Educational Director Picker X-Ray Corporation. In Two Volumes. St. Louis. C. V. Mosby Company. 1949. Price \$30.00.

The work consists of two well bound volumes excellently illustrated with numerous photographs for the various radiologic positions. Radiographs corresponding to these positions are well reproduced.

Not only are all routine positions used in ordinary radiographic procedures illustrated, but special x-ray procedures also are well reproduced.

Preliminary anatomic study is made before each section to facilitate the understanding of the various parts of the body to be radiographed.

This should represent an excellent text for the technician for reference as well as routine work. It should be a distinct asset to any radiologic department.

L. R. S.

**NEUROANATOMY.** By Fred A. Mettler, M.D., Ph.D., Associate Professor of Anatomy, College of Physicians and Surgeons, Columbia University, New York. With 357 Illustrations, including 33 in color. Second Edition. C. V. Mosby Company. St. Louis. 1948. Price \$10.00.

It is a pleasure to welcome the improved second edition of this textbook on neuroanatomy. The first edition of this textbook already has enjoyed general acceptance because of its comprehensiveness, and careful editing correlated with beautiful illustrations. The general structure of the first edition is maintained although amplified and improved in several sections.

As in the previous volume, there are two major divisions. The first concerns itself with the gross morphology of the nervous system and the second with microscopic detail.

Of particular value to the general reader is the section dealing with the structure surrounding the brain. The topography with relation to the dura and the leptomeninges and the vascular arrangement of the brain are outlined excellently. The descriptive anatomy will prove to be of great value for orientation to the clinician. This is of especial value in clinical correlation, with respect to infectious and neoplastic metastatic routes from distant areas to the more detailed structures of the subcortex, thalamus and basal ganglia.

In this second edition the author has made detailed studies of the association connections of the hemispheres. These are of particular importance in the light of recent investigations carried out elsewhere and,



## All worth while laboratory examinations; including—

Tissue Diagnosis  
The Wassermann and Kahn Tests  
Blood Chemistry  
Bacteriology and Clinical Pathology  
X-Ray including Gastro-Intestinal Study and Gall Bladder Visualization  
Basal Metabolism  
Pregnancy Test  
Electrocardiograms with interpretation

## National Pathological Laboratory

RALPH L. THOMPSON, M.D., Director  
601-616 University Club Bldg.  
ST. LOUIS  
Telephone JEFFerson 6088

ACCIDENT • HOSPITAL • SICKNESS

# INSURANCE

For Physicians, Surgeons, Dentists Exclusively



<b>\$5,000.00 accidental death</b>	<b>\$ 8.00</b>
\$25.00 weekly indemnity, accident and sickness quarterly	
<b>\$10,000.00 accidental death</b>	<b>\$16.00</b>
\$50.00 weekly indemnity, accident and sickness quarterly	
<b>\$15,000.00 accidental death</b>	<b>\$24.00</b>
\$75.00 weekly indemnity, accident and sickness quarterly	
<b>\$20,000.00 accidental death</b>	<b>\$32.00</b>
\$100.00 weekly indemnity, accident and sickness quarterly	

Cost has never exceeded amounts shown.  
Also Hospital Expense for Members  
Wives and Children

85c out of each \$1.00 gross income used for members' benefit

INVESTED ASSETS	PAID FOR CLAIMS
\$3,700,000.00	\$15,700,000.00

\$200,000.00 deposited with State of Nebraska for protection of our members.

Disability need not be incurred in line of duty—benefits from the beginning day of disability

**PHYSICIANS CASUALTY ASSOCIATION**  
**PHYSICIANS HEALTH ASSOCIATION**

47 years under the same management

400 First National Bank Building, OMAHA 2, NEBR.



From where I sit  
by Joe Marsh

## Now Hospitals Are "Banks," Too!

*Doc Simpson was saying, "Hospitals are building up 'bone banks' that work just like blood banks. When bone is needed, the surgeon takes one from a refrigerator, cuts it to the right shape and simply splices it in."*

"You doctors are sure making progress," I says, "but tell me, are any of the patients fussy about *whose* bone they're getting?"

"No sir!" replies Doc. "No more than they worry about *whose* blood they get. No one yet asked for a bone from a man who went to the same school or church he did."

From where I sit, it would be a better world if we were half as willing to accept other people's ideas and tastes, as we seem to be willing to accept their bone and blood. There'll always be differences. Some like buttermilk, others would rather have a sparkling glass of temperate beer. But underneath we're pretty much the same—deserving each other's respect and tolerance!

*Joe Marsh*

# HOTEL RESERVATIONS

*for the 100th anniversary*

## ANNUAL SESSION

Jefferson Hotel, St. Louis

March 26, 27, 28, 29, 1950

Hotel reservations for the Annual Session should be made direct to the hotel of choice. Early reservations will insure obtaining the reservation desired. The application following may be used in place of a letter to the hotel, if reservation is desired at the Jefferson Hotel.

Room For Two			
Single	Double Bed	Twin Beds	Suites—2 Rooms
\$4.50	\$6.00	\$7.50	\$15.00
5.00	6.50	8.00	22.00
6.00	7.50	8.50	
6.50	8.00		

Hotel:

Please reserve the following accommodations for the Annual Session of the Missouri State Medical Association, March 26-29, 1950.

Single Room ..... Double Room ..... Twin Bedded Room .....

2 Room Suite .....

Rate: From \$..... to \$.....

Arriving at Hotel (date) ..... (hour) ..... a. m. .... p. m.

Leaving (date) ..... (hour) ..... a. m. .... p. m.

Names and addresses of all persons for whom you are requesting reservations and who will occupy the rooms asked for:

.....  
 .....  
 .....

Individual Requesting Reservations:

Name .....

Address .....

City and State .....



# from *head* to *toe*

CEREVIM-fed children showed greater clinical improvement, in the following nutrition-influenced categories, than children fed on ordinary unfortified cereal or no cereal at all:<sup>1</sup>

- hair lustre
- recession of corneal invasion
- retardation of cavities
- condition of gums
- condition of teeth
- skin color
- skeletal maturity
- skeletal mineralization
- \*blood plasma vitamin A increase
- \*blood plasma vitamin C increase
- subcutaneous tissues
- dermatologic state
- urinary riboflavin output
- musculature
- plantar contact

*Here's why:* CEREVIM is not just a cereal.

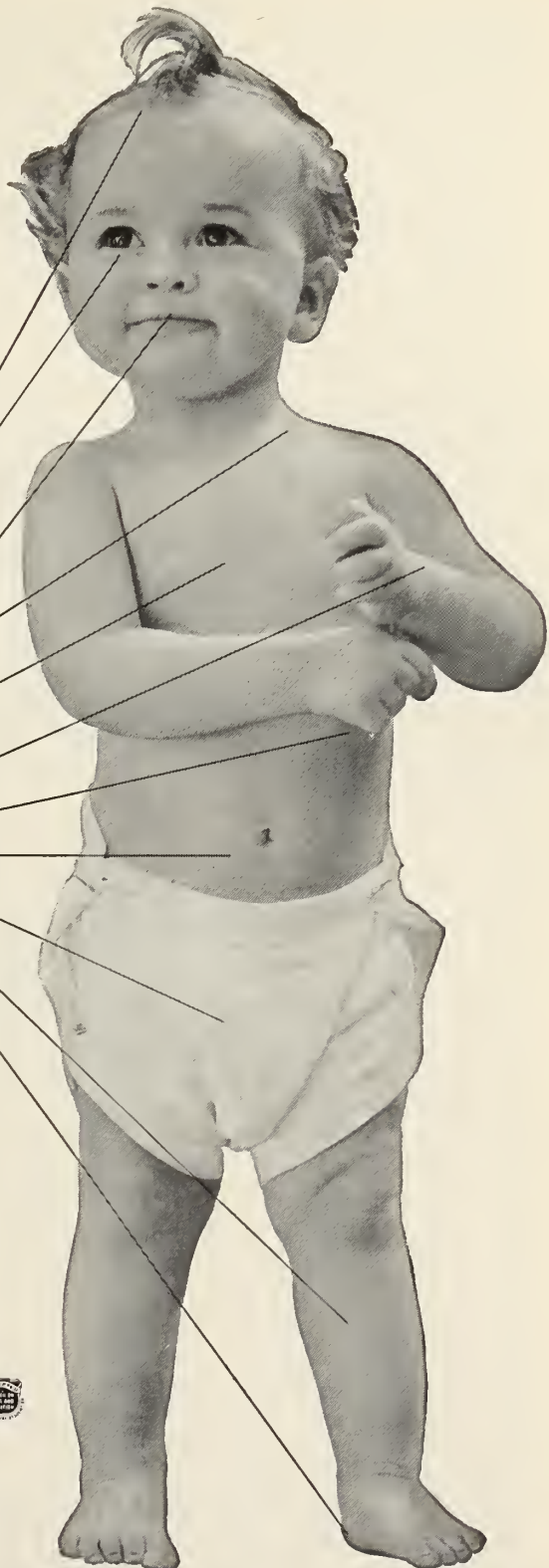
*Much more:* CEREVIM provides 8 *natural foods*: whole wheat meal, oatmeal, milk protein, wheat germ, corn meal, barley, Brewers' dried yeast and malt – PLUS added *vitamins* and *minerals*.

# CEREVim

CEREALS + VITAMINS + MINERALS

1. "A Study of Enriched Cereal in Child Feeding" Urbach, C.; Mock, P. B., and Stokes, Jr., J. Pediatrics 1:70, 1948.

\*Cerevim contains neither vitamin A nor C but possibly exercises an A-and-C sparing effect attributed to its high content of protein and major B vitamins.



M & R DIETETIC LABORATORIES, INC. • Columbus 16, Ohio

recently, on a clinical basis by the author. The expanding importance of psychosurgery has brought to light the importance of correlation between the various subdivisions of the thalamus and cortex. This section alone is of signal importance and indicates the progressive nature of this work in which an attempt is made to lay the foundations of correlation between neuroanatomy, neurophysiology and clinical application.

The second section of the book confines itself to microscopic anatomy of the central nervous system. This section is richly illustrated by accurate drawings of various fiber tracts, actual microphotographs and

diagrammatic schemata which clarify the function of the main tracts in the association system. The work on the thalamic nuclei and their relation to the various areas of the cerebral cortex make this section valuable because of its attempt to correlate function with structure. The bibliography is detailed, extensive and in itself represents a thorough sifting of pertinent neuro-anatomic and neurophysiologic data.

The book is a comprehensive text which well maintains its position as one of the most complete in its field, rich in illustrations and diagram and can be readily recommended to the general student and specialist alike.

E. S.



## The Mary E. Pogue School

Complete facilities for training Retarded and Epileptic children educationally and socially. Pupils per teacher strictly limited. Excellent educational, physical and occupational therapy programs.

Recreational facilities include riding, group games, selected movies under competent supervision of skilled personnel.

Catalogue on request.

G. H. Marquardt, M.D. Barclay J. Macgregor  
Medical Director Registrar

27 Geneva Road, Wheaton, Illinois  
(Near Chicago)

## The Norbury Sanatorium

Established 1901—Incorporated—  
Licensed—Jacksonville, Illinois

• ALBERT H. DOLLEAR, B.S., M.D., Superintendent. FRANK GARM NORBURY, A.M., M.D., Medical Director. SAMUEL N. CLARK, M.D., Physician. HENRY A. DOLLEAR, M.D., Physician.



### Maplecrest

• Pictured above — Restful, congenial home-like surroundings are combined with the most modern diagnostic and therapeutic equipment.

### Maplewood

• Pictured at left — Most comfortable homes for individuals requiring rest, scientific diagnosis and treatment. Fireproof construction.





## CHECK LIST

for choice of  
a laxative

Phospho-  
Soda  
(FLEET)\*

TYPE OF  
ACTION

- ✓ Prompt action
- ✓ Thorough action
- ✓ Gentle action

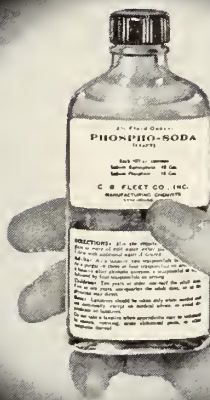
SIDE  
EFFECTS

- ✓ Free from Mucosal Irritation
- ✓ Absence of Constipation Rebound
- ✓ No Development of Tolerance
- ✓ Safe from Excessive Dehydration
- ✓ No Disturbance of Absorption of Nutritive Elements
- ✓ Causes no Pelvic Congestion
- ✓ No Patient Discomfort
- ✓ Nonhabituating
- ✓ Free from Cumulative Effects

ADMINIS-  
TRATION

- ✓ Flexible Dosage
- ✓ Uniform Potency
- ✓ Pleasant Taste

## Judicious Laxation



## through controlled action

Phospho-Soda (Fleet)\*, over the years, has won discriminating preference by thousands of physicians . . . because of its controlled action—its freedom from undesirable side effect—and its ease of administration. Your prescription of Phospho-Soda (Fleet)\* assures effective (and safe) results. Liberal samples on request.

**C. B. FLEET CO. INC.**  
LYNCHBURG, VIRGINIA

\*'PHOSPHO-SODA' and 'FLEET' are registered trade-marks of C. B. Fleet Co., Inc.



Phospho-Soda (Fleet)\* is a solution containing in each 100 cc. sodium biphosphate 48 Gm. and sodium phosphite 18 Gm.

ACCEPTED FOR ADVERTISING BY THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION



This is how Chic Young, the cartoonist, makes a first rough sketch for the famous strip.



Then when each panel in a strip meets his approval, he makes a careful pencil rendering as above.



After this, the pencil rendering is carefully inked in, as you see here.

## STEP BY STEP . . .

that's the way it's done successfully!

AS YOU CAN SEE, Chic Young, who draws the popular "Blondie" comic strip, goes through many steps to arrive at a finished cartoon.

And, cartoonist Chic Young, together with millions of other smart Americans, will tell you that the step-by-step method is the easiest, surest way of doing anything worth while.

Particularly, saving money.

One of the easiest and surest ways to

set aside any worth while amount of money is to buy United States Savings Bonds the step-by-step method—

So set aside a regular amount week after week, month after month, year after year. Then in 10 short years you will have a mighty nice nest egg tucked away.

**Get started now.** Get your Bonds through Payroll Savings or at your bank or post office.

### AUTOMATIC SAVING IS SURE SAVING—U. S. SAVINGS BONDS



Contributed by this magazine in co-operation with the Magazine Publishers of America as a public service.



**DIGILANID...**

*crystalline complex  
of whole leaf*

The dependable action of the total glycosides of *Digitalis lanata* whole leaf is provided by DIGILANID®, crystalline complex of lanatosides A, B and C, in regulated percentages.

Possessing the additional advantages of uniform potency, stability and virtual freedom from impurities, DIGILANID may be regarded as "crystalline whole leaf."

**DIGILANID**

Tablets • Liquid • Ampuls • Suppositories



**dependable and potent**

*Originality • Elegance • Perfection*

**SANDOZ PHARMACEUTICALS**  
Division of SANDOZ CHEMICAL WORKS, INC.  
NEW YORK 14, N.Y. • CHICAGO 6, ILL. • SAN FRANCISCO 8, CAL.



## North Shore Health Resort

Winnetka, Illinois

*on the Shores of  
Lake Michigan*

A completely equipped sanitarium for the care of  
*nervous and mental disorders, alcoholism and drug addiction*  
offering all forms of treatment, including electric shock.

**SAMUEL LIEBMAN, M.S., M.D.**

*Medical Director*

225 Sheridan Road

Phone Winnetka 211



More and more  
doctors are prescribing  
Daricraft Homogenized  
Evaporated Milk  
for babies . . . and for  
convalescent diets

Always uniform in quality, safe, steri-  
lized, high in food value and minerals.  
Contains 400 U. S. P. units Vitamin D  
per pint of Daricraft. Easily digested.



PRODUCERS CREAMERY CO., SPRINGFIELD, MO.

## CAMP SURGICAL SUPPORTS



The Neurological Hospital,  
2625 The Paseo, Kansas City,  
Missouri. Operated by the Rob-  
inson Clinic, for the care and  
treatment of nervous and men-  
tal patients and associated  
conditions.

## Mullen Ambulance Company

PRIVATE AMBULANCE  
SERVICE

Local and Distant Trips  
Day or Night

5159 Delmar, ST. LOUIS      Forest 1913

## FAITH HOSPITAL

A. J. SIGNORELLI, M.D.,  
Medical Director

Goodfellow 6262

2800 N. Taylor, St. Louis, Mo.



**AT HOME  
OR AWAY**

**SPOT  
TESTS**

**SIMPLIFY  
URINALYSIS**

**No Test Tubes • No Measuring • No Boiling**

Diabetics welcome "Spot Tests" (ready to use dry reagents), because of the ease and simplicity in using. No test tubes, no boiling, no measuring; just a little powder, a little urine—color reaction occurs at once if sugar or acetone is present.

### *Galatest... Acetone Test* (DENCO)

**FOR DETECTION OF  
SUGAR IN THE URINE**

**FOR DETECTION OF  
ACETONE IN THE URINE**

**SAME SIMPLE  
TECHNIQUE FOR BOTH**

**1. A LITTLE POWDER**

**2. A LITTLE URINE**

**COLOR REACTION IMMEDIATELY**



A carrying case containing one vial of Acetone Test (Denco) and one vial of Galatest is now available. This is very convenient for the medical bag or for the diabetic patient. The case also contains a medicine dropper and a Galatest color chart. This handy kit or refills of Acetone Test (Denco) and Galatest are obtainable at all prescription pharmacies and surgical supply houses.

*Accepted for advertising in the Journal of the A.M.A.*

**WRITE FOR DESCRIPTIVE LITERATURE**

*Acetone Test* (DENCO)... *Galatest*  
**The Denver Chemical Manufacturing Co., Inc.**

163 Varick Street, New York 13, N. Y.

### **Cook County Graduate School of Medicine**

#### **Announces Continuous Courses**

**SURGERY**—Intensive Course in Surgical Technique, Two Weeks, starting November 28, January 23, February 20.

Surgical Technique, Surgical Anatomy & Clinical Surgery, Four Weeks, starting November 7, February 6, March 6.

Surgery of Colon and Rectum, One Week, starting November 28, March 6.

Esophageal Surgery, One Week, starting April 17. Breast & Thyroid Surgery, One Week, starting June 19.

Thoracic Surgery, One Week, starting June 12.

Fractures & Traumatic Surgery, Two Weeks, starting April 17.

**GYNECOLOGY**—Intensive Course, Two Weeks, starting February 20.

Vaginal Approach to Pelvic Surgery, One Week, starting November 7, March 6.

**OBSTETRICS**—Intensive Course, Two Weeks, starting November 7, March 6.

**PEDIATRICS**—Intensive Course, Two Weeks, starting April 3.

**MEDICINE**—Intensive General Course, Two Weeks, starting April 3.

Gastroscopy, Two Weeks, starting March 6.

**DERMATOLOGY**—Formal Course, Two Weeks, starting May 1. Informal Clinical Course every two weeks.

**ROENTGENOLOGY**—Diagnostic & Lecture Course First Monday every month. Clinical Course Third Monday of every month. X-Ray Therapy every two weeks.

**UROLOGY**—Intensive Course, Two Weeks, starting April 17.

Cystoscopy, Ten Day Practical Course, every two weeks.

**GENERAL, INTENSIVE AND SPECIAL COURSES IN ALL BRANCHES OF MEDICINE, SURGERY AND THE SPECIALTIES.**

**Teaching Faculty—Attending Staff, Cook County Hospital Registrar, 427 South Honore St., Chicago 12, Ill.**



One of Four Main Buildings

## **GLENWOOD SANATORIUM**

A Private Hospital for Care of Nervous and Mental Disorders, Alcohol and Narcotic Addictions.

Thoroughly equipped for all the approved therapeutic measures. Insulin, metrazol and electro shock used in selected cases.

Four main buildings for patients permit ample classification facilities. Large grounds composed of about fifty acres make many out-of-door activities possible.

Phone Webster 1056

*For full information, address*

**GLENWOOD SANATORIUM, Webster Groves, St. Louis 19, Mo.**

## COMMERCIAL ANNOUNCEMENTS

**FOR SALE:** Large amount of office equipment of the late Dr. R. H. Parker. Terms. Call or write Mrs. Edith M. Parker, Hunnewell, Mo.

**FOR SALE:** Complete office equipment, including X-Ray 100 Ma., 1946; Electrocardiogram, 1948, and short-wave Diathermy, 1948. All in perfect operating condition and practically new. Write Mrs. C. J. Mellies, 1036 N. Kingshighway, Sikeston, Mo.

**FOR SALE:** Active general practice in county seat town. Completely equipped new office. Practice will gross \$20,000 a year. This is an excellent opportunity. Will sell for \$8,000. Leaving because of asthma. Address Box 167, Missouri State Medical Association, 623 Missouri Bldg., St. Louis 3, Mo.

**BERNARD NURSING HOME:** Accepts patients who are chronically ill, disabled, aged or invalided, whose primary need is good nursing care. Our home is the finest in the state. It is beautifully furnished, centrally located, equipped with automatic sprinkler system and is adequately staffed. Address 4385 Maryland, St. Louis 8, Mo. Telephone Lucas 9290.

**Hair Permanently Removed by Electrolysis**

**DOROTHY WORRELL, R.N.**

**233 N. Vandeventer, St. Louis**

**Telephone, Jefferson 9436**

*Work Done on Prescription of Physicians Only*

### THE STOKES SANITARIUM

923 Cherokee Road,  
Louisville, Kentucky  
Our ALCOHOLIC treatment destroys the craving, restores the appetite and sleep, and rebuilds the physical and nervous condition of the patient. Liquors withdrawn gradually; no limit on the amount necessary to prevent or relieve delirium.

MENTAL patients have every comfort that their home affords.

The DRUG treatment is one of gradual Reduction. It relieves the constipation, restores the appetite and sleep; withdrawal pains are absent. No Hyoscine or rapid withdrawal methods used.

NERVOUS patients are accepted by us for observation and diagnosis as well as treatment.

E. W. STOKES, Medical Director. Established 1904  
Telephone—Highland 2101

## INDEX TO ADVERTISERS

Abbott Laboratories .....	795
Aloe, A. S., Company .....	758
American Meat Institute .....	786
Ar-Ex Cosmetics, Inc. ....	764
Ayerst, McKenna & Harrison, Ltd. ....	805
Camel Cigarettes .....	761
Camp, S. H., & Co. ....	802
Central Pharmacal Co. ....	807
Coca-Cola Company .....	789
Cook County Graduate School of Medicine.....	817
Denver Chemical Mfg. Co., Inc. ....	817
Duncan Laboratories .....	819
Faith Hospital .....	816
Fleet, C. B., Co., Inc. ....	813
Glenwood Sanatorium .....	817
Gradwohl Laboratories .....	799
Hamilton-Schmidt .....	764
Hanger, J. E., Inc. ....	799
Holland-Rantos Co. ....	759
Isle, W. E., Co. ....	816
Lederle Laboratories .....	801
Lilly, Eli, & Co. ....	Insert
Luzier's, Inc. ....	752
M & R Dietetic Laboratories, Inc. ....	811
Major Clinic .....	753
Mead Johnson & Co. ....	820
Medical Protective Co. ....	764
Merck & Co., Inc. ....	785
Milwaukee Sanitarium .....	789
Mosby, C. V., Company .....	782
Mullen Ambulance .....	816
National Pathological Labs. ....	809
Norbury Sanatorium .....	812
North Shore Health Resort .....	815
Parke, Davis & Co. ....	750, 751
Philip Morris & Co. ....	797
Physicians Casualty Assn. ....	809
Pogue, Mary E., School .....	812
Producers Creamery Co. ....	816
Quincy X-Ray & Radium Labs. ....	764
Ralph Sanitarium .....	762
Rexair Division .....	760
Robinson Clinic, Inc. ....	816
St. Vincent's Sanitarium .....	760
Sandoz Chemical Works .....	815
Schering Corporation .....	793
Searle, G. D., & Co. ....	781
Smith-Dorsey Co. ....	757
Southern Medical Association .....	799
Squibb, E. R., & Sons .....	755
Stokes Sanitarium .....	818
U. S. Brewers Foundation, Inc. ....	809
U. S. Savings Bond .....	814
Wallace Sanitarium .....	758
Winthrop-Stearns, Inc. ....	763
Worrell, Dorothy .....	818
Zemmer Company .....	764



*Your* **LABORATORIES**  
*Our* **RESPONSIBILITY**

CLINICAL PATHOLOGY  
PATHOLOGIC ANATOMY

**DUNCAN LABORATORIES**

*Established 1921*

909 Argyle Bldg. **KANSAS CITY 6, MO.**  
230 Frisco Bldg. **JOPLIN, MISSOURI**


RALPH EMERSON DUNCAN, M.D.

MAURICE L. JONES, M.D.

In addition to diagnostic laboratory services, chemically accurate and clinically tested reagents, solutions, stains and culture media are available for immediate delivery.

*The need is continuous*  
from infancy  
to adolescence



 While careful supervision is commonly maintained over the feeding of infants, in too many cases the nutrition of older children escapes the doctor's supervision. Dietary surveys of older children have shown a high incidence of malnutrition.

Mead's Oleum Percomorphum With Other Fish Liver Oils and Viosterol is a reliable, convenient product for providing vitamin D in addition to vitamin A. The vitamin D exercises a favorable influence on

calcium and phosphorus metabolism, plays an important role in tooth formation, and, in some instances, aids in preventing and arresting dental caries.

With the possible exception of the middle of the first year, the need for vitamin D is probably greater during adolescence than at any other time.

## OLEUM PERCOMORPHUM

**DROPPER BOTTLES**—10 cc. and 50 cc. (60,000 units vitamin A and 8,500 units vitamin D per gram).

**CAPSULES**—Bottles of 50 and 250 capsules (5,000 units vitamin A; 700 units vitamin D per capsule).





**THE**

# **JOURNAL**

*of the*

**MISSOURI STATE MEDICAL ASSOCIATION**

VOLUME 46  
NUMBER 12

**DECEMBER, 1949**

SINGLE COPY, 40 CENTS  
PER YEAR, \$3.00

## **ORIGINAL ARTICLES**

**Hypoglycemia of the Newborn Infant**

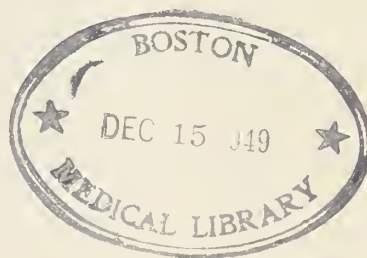
**Transabdominal Vagotomy**

**A Method of Avoiding Operative Stricture**

**Following Hemorrhoidectomy**

**Hypertension**

**Interpreting Medicine for the Layman**



## **EDITORIALS**

**Centennial Session**

**Report Medicine for the Public**

*(Contents Index Page 825)*

**100TH ANNIVERSARY, MARCH 26-29, 1950**



# ADRENALIN

*most  
valuable*

**PARKE, DAVIS & COMPANY**



## ***Effective***

in relaxing bronchial muscles and in markedly increasing vital capacity, ADRENALIN (epinephrine, Parke-Davis) is "most valuable for treating a severe acute attack of asthma."\* ***One of the truly basic drugs***, it is also used extensively in the treatment of such conditions as urticaria, angioneurotic edema, anaphylaxis, serum sickness and nitritoid reactions.

## ***Adrenalin***

plays a prominent life-saving role in the Adams-Stokes syndrome, anesthesia accidents and other emergencies.

Combined with anesthetics it minimizes bleeding and prolongs anesthesia by localizing the site of action. Topically applied to mucous membranes it relieves catarrhal and congestive conditions.

## ***Indispensable***

in medical and surgical practice, ADRENALIN — the pure, crystalline hormone of the adrenal medulla — was isolated and its formula determined at the Parke-Davis Research Laboratories in 1901.

## ***Available***

as ADRENALIN CHLORIDE SOLUTION 1:1000;  
ADRENALIN CHLORIDE SOLUTION 1:100;  
ADRENALIN IN OIL 1:500.

\*New and Nonofficial Remedies, Philadelphia,  
J. B. Lippincott, 1949, p. 284.





## sequence in biliary tract surgery



### preoperatively-Decholin

brand of dehydrocholic acid stimulates an abundant flow of thin bile, helping to "clear the arena" for surgery by the removal of inspissated bile, mucus, small stones and other accumulations from the choledochus. This powerful hydrocholeretic action also produces functional distension of the gallbladder and ducts, aiding in identification and surgical procedure.



### postoperatively-Decholin

provides an effective means of flushing out the biliary tract. Used together with antispasmodics such as atropine and nitroglycerin, *Decholin* helps to remove blood clots, residual debris and hidden, small calculi. This method, recently re-emphasized by Best,<sup>1</sup> is useful with or without T tube drainage. In reflex biliary stasis, *Decholin* serves to prompt an adequate secretion of bile.

For more rapid and intense hydrocholeresis, *Decholin Sodium*, brand of sodium dehydrocholate, is given intravenously, followed by a course of *Decholin* tablets.



# Decholin

*brand of dehydrocholic acid*

**Decholin** (brand of dehydrocholic acid) Tablets of 3¼ grains, in bottles of 25, 100, 500 and 1000.

**Decholin Sodium** (brand of sodium dehydrocholate) 20% solution, in ampuls of 3 cc., 5 cc. and 10 cc., boxes of 3 and 20.

1. Best, R. R.: Ann. Surg. 128: 348 (Sept.) 1948.

DECHOLIN and DECHOLIN SODIUM: Trademarks registered in U. S. and Canada.



AMES COMPANY, INC.  
ELKHART, INDIANA



## CONTENTS

Hypoglycemia of the Newborn Infant. H. Ewing Wachter, M.D., St. Louis, Mo. ....	837	Reporting Medicine for the Public.....	873
Transabdominal Vagotomy. Melvin A. Casberg, M.D., St. Louis, Mo. ....	843	News Notes .....	874
A Method of Avoiding Operative Stricture Following Hemorrhoidectomy. R. Hackmeyer, M.D., St. Louis, Mo. ....	851	Musings of the Field Secretary.....	874
Hypertension. Paul A. Knepper, M.D., Louis G. Neudorff, M.D., Robert M. Brooker, M.D. and John R. McDaniel, M.D., St. Joseph, Mo. ....	855	Deaths .....	875
Interpreting Medicine for the Layman. Steven M. Spencer .....	862	Organization Activities .....	875
President's Page .....	872	Society Proceedings .....	875
Editorials—		Index to Volume 46 .....	878
Centennial Session .....	873	Correspondence .....	878
		Book Reviews .....	883
		Books Received .....	886
		Miscellany .....	888
		Commercial Announcements .....	890

Entered as Second-Class Matter, February 18, 1925, at the Post Office at Fulton, Mo., under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1003, Act of October 3, 1917, authorized July 30, 1918. Business Office, 1201-5 Bluff St., Fulton, Mo., and 623 Missouri Building, St. Louis, Mo., Editorial Office, 623 Missouri Building, St. Louis, Mo. Return postage guaranteed. Printed by The Ovid Bell Press, Inc., Fulton, Mo.

# THE MAJOR CLINIC ASSOCIATION

3100 Euclid Avenue, Kansas City, Missouri

A Well  
Equipped  
Institution  
for the  
Treatment of  
Nervous and  
Mental  
Diseases and  
Alcohol  
Drug and  
Tobacco  
Addictions



Beautiful  
Location  
Large, Well  
Shaded  
Grounds,  
Spacious  
Porches,  
All Modern  
Methods for  
Restoring  
Patients to a  
Normal  
Condition

HERMON S. MAJOR, M.D.  
Medical Director

HERMON S. MAJOR, JR.  
Business Manager

**AMERICAN MEDICAL ASSOCIATION**

President, Ernest Edward Irons, Chicago.  
 President-Elect, Elmer L. Henderson, Louisville.

Interim Session, Washington, D. C.,  
 December 6-9, 1949

**MISSOURI STATE MEDICAL ASSOCIATION**

92nd Annual Session, St. Louis, March 26-29, 1950

President, Wallis Smith, Springfield.  
 President-Elect, W. A. Bloom, Fayette.  
 Vice Presidents, J. C. Creech, Troy; E. J. McIntire, Carthage;  
 H. M. Henrickson, Poplar Bluff.  
 Speaker, F. T. H'Doubler, Springfield; Vice Speaker, Victor E. Scherman, St. Louis.  
 Treasurer, C. E. Hyndman, St. Louis.  
 Secretary, H. E. Petersen, St. Joseph.  
 Editor, R. O. Muether, St. Louis.  
 Secretary-Editor Emeritus, R. L. Thompson, St. Louis.  
 Field Secretary, Raymond McIntyre, St. Louis.  
 Assistant Editor-Business Manager, Helen Penn, St. Louis.  
 Executive Secretary, Tom R. O'Brien, 623 Missouri Bldg., St. Louis.

**Delegates to the American Medical Association**

R. E. Schlueter, St. Louis, 1949-51; alternate, F. G. Pernoud, St. Louis. James R. McVay, Kansas City, 1949-1951; alternate, R. B. Wray, Nevada. W. L. Allee, Eldon, 1948-50; alternate, Paul Baldwin, Kennett. Howard B. Goodrich, Hannibal, 1948-1950.

**Standing Committees**

**Scientific Work**—A. N. Arneson, St. Louis, Chairman (1951); Victor B. Buhler, Kansas City (1952); H. E. Petersen, St. Joseph.

**Postgraduate Course**—M. Pinson Neal, Columbia, Chairman (1952); Carl R. Ferris, Kansas City (1952); Raymond O. Muether, St. Louis (1951); Edward Massie, St. Louis (1951); Guy D. Callaway, Springfield (1950). **Associate Members**—W. W. Tillman, Bolivar; Kenneth Glover, Mount Vernon; Paul O. Hagemann, St. Louis; D. L. Sexton, St. Louis.

**Publication**—R. O. Muether, St. Louis, Chairman; V. T. Williams, Kansas City; H. E. Petersen, St. Joseph; M. D. Overholser, Columbia; Paul O. Hagemann, St. Louis.

**Public Policy and Public Relations**—Armand D. Fries, St. Louis, Chairman (1952); J. W. Allee, Columbia (1950); F. R. Crouch, Farmington (1951); Howard B. Goodrich, Hannibal (1951); John Growdon, Kansas City (1950). **Associate Member**—Cyril W. Schumacher, St. Louis.

**Defense**—Charles E. Hyndman, St. Louis, Chairman (1951); Roland S. Kieffer, St. Louis (1950); L. F. Heimbarger, Springfield (1950); O. B. Zeinert, St. Louis (1952); L. P. Forgrave (1952).

**Medical Education and Hospitals**—John S. Knight, Kansas City, Chairman (1951); F. T. H'Doubler, Springfield (1950); O. J. Gibson, Cape Girardeau (1952); D. M. Dowell, Chillicothe (1950); Oliver Abel, St. Louis (1952).

**Cancer**—E. C. Ernst, St. Louis, Chairman (1950); E. Kip Robinson, St. Louis (1951); Everett Sugarbaker, Jefferson City (1951); William E. Leighton, St. Louis (1952); Marvin Napper, Springfield (1952).

**Medical Economics**—Carl F. Vohs, St. Louis, Chairman (1950); Morris S. Harless, Kansas City (1951); C. T. Herbert, Cape Girardeau (1951); G. A. Aiken, Marshall (1952); A. P. Rowlette, Moberly (1952).

**Mental Health**—E. F. Hoxter, Farmington, Chairman (1951); Paul Hines, St. Louis (1950); Orr Mullinax, Jefferson City (1950); B. Landis Elliott, Kansas City (1952); Frank M. Grogan, St. Louis (1952).

**Maternal Welfare**—E. Lee Dorsett, St. Louis, Chairman (1952); Leo Hartnett, St. Louis (1952); J. L. Johnston, Springfield (1951); E. E. Wadlow, St. Joseph (1950); J. Milton Singleton, Kansas City (1950).

**Infant Care**—G. V. Herrman, Kansas City, Chairman (1951); Eugene Schwartz, Springfield (1951); H. E. Petersen, St. Joseph (1950); Peter G. Danis, St. Louis (1952); Park J. White, St. Louis (1952). **Associate Members**—Joseph C. Jaudon, St. Louis; Daniel B. Landau, Hannibal.

**Health and Public Instruction (McAlester Foundation)**—A. W. McAlester, III, Kansas City, Chairman (1950); M. K. Underwood, Rolla (1951); B. E. DeTar, Joplin (1951); Joseph Conrad, Chillicothe (1950); J. Earl Smith, St. Louis (1952).

**Constitution and By-Laws**—B. Landis Elliott, Kansas City, Chairman (1950); J. H. Summers, Lebanon (1951); John J. Hammond, St. Louis (1950); W. Logan Allee, Eldon (1952); H. O. Loyd, Jefferson City (1952).

Year indicates expiration of term.

**Fractures**—Daniel L. Yancey, Springfield, Chairman (1952); W. J. Stewart, Columbia (1951); N. S. Pickard, Kansas City (1951); W. R. Bohne, St. Louis (1950); J. Albert Key, St. Louis (1950). **Associate Members**—Jacob Kulowski, St. Joseph; B. L. Murphy, Hannibal.

**Conservation of Eyesight**—C. Souter Smith, Springfield, Chairman (1952); Robert Mattis, St. Louis (1951); A. N. Le-moine, Kansas City (1950); C. P. Dyer, St. Louis (1950); Robert S. Minton, St. Joseph (1952). **Associate Members**—Winfred L. Post, Joplin; Philip Luedde, St. Louis; John McLeod, Kansas City; G. J. Tygett, Cape Girardeau; S. L. Freeman, Kirksville; H. B. Stauffer, Jefferson City; E. D. Tenaglia, St. Louis.

**Control of Venereal Disease**—A. W. Neilson, St. Louis, Chairman (1952); W. S. Sewell, Springfield (1951); Charles Greenberg, St. Joseph (1950); Hugh L. Dwyer, Kansas City (1950); E. M. Cannon, St. Louis (1952).

**Industrial Health**—V. T. Williams, Kansas City, Chairman (1951); Horace F. Flanders, Kansas City (1951); E. M. Fessenden, St. Louis (1950); A. M. Ziegler, Kansas City (1952); R. A. Sutter, St. Louis (1952). **Associate Members**—R. Emmet Kelly, St. Louis; H. M. Roebber, Bonne Terre.

**Special Committees**

**Physical Medicine**—F. Garrett Pipkin, Kansas City, Chairman (1951); Emmett Settle, Rock Port (1950); Luke A. Knese, St. Louis (1950); A. J. Kotkis, St. Louis (1952); J. L. Washburn, Versailles (1952).

**Tuberculosis**—E. E. Glenn, Springfield, Chairman; Lawrence E. Wood, Kansas City; J. L. Mudd, St. Louis; Paul Murphy, St. Louis; C. A. Brashear, Mount Vernon; W. P. McDonald, St. Joseph; I. J. Flance, St. Louis; Florence E. MacInnis, Kansas City.

**Study of Cardiac Diseases**—A. Graham Asher, Kansas City, Chairman (1952); Drew Luten, St. Louis (1951); A. M. Estes, Jackson (1951); Julius Jensen, St. Louis (1950); Glenn W. Hendren, Liberty (1952). **Associate Members**—Horace W. Carle, St. Joseph; J. W. Fleming, Moberly; C. B. Davis, Nevada; Arthur Strauss, St. Louis; William I. Park, Springfield.

**Rural Medical Service**—R. W. Kennedy, Marshall, Chairman; A. E. Spelman, Smithville; J. W. Well, Palmyra; Martin M. Hart, Salem; R. B. Wray, Nevada.

**COUNCILOR DISTRICTS AND COUNTIES IN EACH DISTRICT\***

J. W. THOMPSON, St. Louis, Chairman

E. C. BOHRER, West Plains, Vice Chairman

**First District:** Councilor, Donald M. Dowell, Chillicothe. Counties: Andrew, Atchison, Buchanan, Caldwell, Carroll, Clay, Clinton, Daviess, De Kalb, Gentry, Grundy, Harrison, Holt, Livingston, Mercer, Nodaway, Platte, Ray, Worth.

**Second District:** Councilor, W. F. Francka, Hannibal. Counties: Adair, Chariton, Clark, Knox, Lewis, Linn, Macon, Marion, Monroe, Pike, Putnam, Ralls, Randolph, Schuyler, Scotland, Shelby, Sullivan.

**Third District:** Councilor, J. William Thompson, St. Louis; St. Louis City.

**Fourth District:** Councilor, Otto W. Koch, Clayton. Counties: Franklin, Jefferson, Lincoln, St. Charles, St. Louis County, Warren.

**Fifth District:** Councilor, J. F. Jolley, Mexico. Counties: Audrain, Boone, Callaway, Camden, Cole, Cooper, Gasconade, Howard, Maries, Miller, Moniteau, Montgomery, Morgan, Osage.

**Sixth District:** Councilor, R. W. Kennedy, Marshall. Counties: Bates, Benton, Cass, Cedar, Henry, Johnson, Lafayette, Pettis, St. Clair, Saline, Vernon.

**Seventh District:** Councilor, Edgar C. Virden, Kansas City. County: Jackson.

**Eighth District:** Councilor, W. S. Sewell, Springfield. Counties: Barry, Barton, Christian, Dade, Dallas, Greene, Hickory, Jasper, Lawrence, McDonald, Newton, Polk, Stone, Taney, Webster.

**Ninth District:** Councilor, E. Claude Bohrer, West Plains. Counties: Carter, Crawford, Dent, Douglas, Howell, Iacleda, Oregon, Ozark, Phelps, Pulaski, Ripley, Shannon, Texas, Wright.

**Tenth District:** Councilor, Frank W. Hall, Cape Girardeau. Counties: Bollinger, Butler, Cape Girardeau, Dunklin, Iron, Madison, Mississippi, New Madrid, Pemiscott, Perry, Reynolds, St. Francois, Ste. Genevieve, Scott, Stoddard, Washington, Wayne.

Counties in italics are not organized.





*During  
Pregnancy*

**SALT  
WITHOUT  
SODIUM**

Water retention (excessive gain in weight—pitting edema) is quite common in pregnancy. Sodium, particularly if used excessively, accelerates this process. Vice versa, sodium restriction can prevent water retention.

Neocurtasal, completely sodium free salt, palatably seasons low sodium diets. Neocurtasal looks and is used like ordinary table salt. Available in 2 oz. shakers and 8 oz. bottles.

Constituents: Potassium chloride, ammonium chloride, potassium formate, calcium formate, magnesium citrate and starch. Potassium content 36%; chloride 39.3%; calcium 0.3%; magnesium 0.2%.

Write for pads of diet sheets.

**NEOCURTASAL<sup>®</sup>**

*Winthrop-Stearns* INC.  
NEW YORK 13, N. Y. WINDSOR, ONT.

# County Societies in Affiliation with the Missouri State Medical Association

COUNTY	DISTRICT	PRESIDENT	ADDRESS	SECRETARY	ADDRESS
Andrew	1	V. R. Wilson	Rosendale	M. L. Holliday	Fillmore
Audrain	5	Glen P. Kallenbach	Mexico	Fred Griffin	Mexico
Barton-Dade	8	Rudolf Knapp	Golden City	Vern T. Bickel	Lamar
Bates	6	C. J. Allen	Rich Hill	John M. Cooper	Butler
Benton	6	T. S. Reser	Cole Camp	James A. Logan	Warsaw
Boone	5	James Baker	Columbia	Helen Yeager	Columbia
Buchanan	1	O. Earl Whitsell	St. Joseph	Joseph L. Fisher	St. Joseph
Butler	10	Frank E. Dinelli	Poplar Bluff	J. W. McPheeters, Jr.	Poplar Bluff
Caldwell-Livingston	1	Virgil D. Vandiver	Chillicothe	Charles M. Grace	Chillicothe
Callaway	5	R. B. Price	Fulton	R. N. Crews	Fulton
Camden	5	E. G. Claiborne	Camdenton	G. T. Myers	Macks Creek
Cape Girardeau	10	O. J. Gibson	Cape Girardeau	Charles F. Wilson	Cape Girardeau
Carroll	1	J. Morris Atwood	Carrollton	John H. Platz	Carrollton
Carter-Shannon	9	Harry Rollins	Winona	W. T. Eudy	Eminence
Cass	6	Herbert A. Tracy	Belton	O. B. Barger	Harrisonville
Chariton-Macon-Monroe					
Randolph	2	D. E. Eggleston	Macon	Henry K. Baker	Moberly
Clay	1	E. C. Robichaux	Excelsior Springs	S. R. McCracken	Excelsior Springs
Clinton	1	Ronald E. Wilbur	Cameron	F. A. Santner	Lathrop
Cole	5	H. M. Wiley	Jefferson City	J. Paul Leslie	Jefferson City
Cooper	5			J. C. Tinchner	Boonville
Dallas Hickory-Polk	8	C. H. Barnett	Bolivar	John R. O'Brien	Bolivar
De Kalb	1			W. S. Gale	Osborn
Dunklin	10	Quinton Tarver	Kennett	E. L. Spence	Kennett
Franklin	4	Herbert H. Schmidt	Marthasville	F. G. Mays	Washington
Greene	8	Daniel L. Yancey	Springfield	Kenneth E. Knabb	Springfield
Grundy-Daviess	1	Joseph M. Quisito	Trenton	E. A. Duffy	Trenton
Harrison	1	Merriam Gearhart	Bethany	W. A. Broyles	Bethany
Henry	6	S. B. Hughes	Clinton	R. S. Hollingsworth	Clinton
Holt	1	F. E. Hogan	Mound City	D. C. Perry	Mound City
Howard	5	Morris Leech	Fayette	Francis D. Dean	Fayette
Jackson	7	Carl R. Ferris	Kansas City	Kenneth E. Cox	Kansas City
Jasper	8	George H. Wood	Carthage	E. H. Hamilton	Joplin
Jefferson	4	Robert H. Donnell	Crystal City	George Hopson	DeSoto
Johnson	6	O. H. Damron	Warrensburg	Reed T. Maxson	Warrensburg
Laclede	9	H. W. Carrington	Lebanon	B. B. Hurst	Lebanon
Lafayette	6	Douglas Kelling	Waverly	Jordan Kelling	Waverly
Lewis-Clark-Scotland	2	J. R. Bridges	Kahoka	P. W. Jennings	Canton
Lincoln	4	H. S. Harris	Troy	J. C. Creech	Troy
Linn	2	Roy R. Haley	Brookfield	J. R. Dixon	Brookfield
Marion-Ralls	2	H. L. Greene	Hannibal	M. J. Roller	Hannibal
Mercer	1	T. S. Duff	Cainsville	M. J. Perry	Princeton
Miller	5			Carl T. Buehler, Jr.	Eldon
Mississippi	10	G. W. Whitaker	East Prairie	E. C. Rolwing	Charleston
Moniteau	5	K. S. Latham	California	L. L. Latham	California
Montgomery	5	E. J. T. Anderson	Montgomery City	S. J. Byland	Wellsville
Morgan	5	A. J. Gunn	Versailles	J. L. Washburn	Versailles
New Madrid	10	L. J. Smith	New Madrid	H. W. Carter	Portageville
Newton	8	H. C. Lentz	Neosho	J. A. Guthrie	Neosho
Nodaway-Atchison-					
Gentry-Worth	1	Frank H. Rose	Albany	Charles D. Humbert	Barnard
North Central Counties					
Medical Society (Adair-					
Schuyler-Knox-					
Sullivan-Putnam)	2	Spencer L. Freeman	Kirkville	John B. Jones	Kirkville
Ozarks Medical Society					
(Barry-Lawrence-Stone-					
Christian-Taney)	8	Fred Wommack	Crane	Kenneth Glover	Mt. Vernon
Pemiscot	10	E. L. Taylor	Steele	C. F. Cain	Caruthersville
Perry	10	J. J. Bredall	Perryville	L. W. Feltz	Perryville
Pettis	6	E. L. Rhodes	Sedalia	Carl D. Siegel	Sedalia
Phelps-Crawford-Dent-					
Pulaski	9	A. A. Drake	Rolla	M. K. Underwood	Rolla
Pike	2	Eugene Barrymore	Bowling Green	Charles H. Lewellen	Louisiana
Platte	1	L. C. Calvert	Weston	H. Graham Parker	Platte City
Ray	1	L. D. Greene	Richmond		
St. Charles	4	J. M. Jenkins	St. Charles	Calvin Clay	St. Charles
St. Francois-Iron-Madison-					
Washington-Reynolds	10	George L. Watkins	Farlington	Marvin T. Haw, Jr.	Bonne Terre
Ste. Genevieve	10	A. E. Sexauer	Ste. Genevieve	R. W. Lanning	Ste. Genevieve
St. Louis City	3	J. W. Thompson	St. Louis	S. J. Merenda	St. Louis
St. Louis	4	Paul R. Whitener	St. Louis	Robert C. Kingsland	St. Louis
Saline	6	James A. Reid	Marshall	Charles A. Veatch	Marshall
Scott	10	W. C. Critchlow	Sikeston	W. J. Ferguson	Sikeston
Shelby	2	D. L. Harlan	Clarence		
South Central Counties					
Medical Societies					
(Howell-Oregon-Texas-					
Wright-Douglas	9	Garrett S. Hogg, Jr.	Cabool	A. C. Ames	Mountain Grove
Stoddard	10	H. A. Harris	Bloomfield	W. C. Dieckman	Dexter
Vernon-Cedar	6	William H. Allen	Nevada	Rolla B. Wray	Nevada
Webster	8	C. R. Macdonnell	Marshfield	E. G. Beers	Seymour



	Calories	Protein Gm.	Calcium Gm.	Copper mg.	Iron mg.	Phosphorus Gm.	Vitamin A I. U.	Thiamine mg.	Riboflavin mg.	Niacin mg.	Ascorbic Acid mg.	Vitamin D I. U.
National Research Council Allowances, Sedentary Man (154 lbs.)	2,400	70	1.0	1.2	12	1.5	5,000	1.2	1.3	12	75	Small Amount
Ovaltine in Milk, 3 Servings *	676	32	1.12	0.5	12	0.94	3,000	1.15	2.0	6.8	30	417
Percentages of N. R. C. Allowances Provided by 3 Servings* of Ovaltine in Milk	28%	46%	112%	42%	100%	63%	60%	97%	111%	57%	40%	Abun- dant

\* Each serving made of ½ oz. of Ovaltine and 8 fl. oz. of whole milk.

# Supplementation

## A sure step to dietary adequacy

The aim of the dietary at all times and under all conditions is to provide ample amounts—not just minimum amounts—of all nutrient essentials. Only when the daily nutrient intake is fully adequate, based on the most authoritative nutritional criteria, can the possibility of adequate nutrition be assured. It is for this reason that a food supplement assumes great importance in daily practice. It should be rich in those nutrients most likely deficient in prevailing diets or in restricted diets during illness and convalescence.

The *multiple nutrient dietary food supplement*, Ovaltine in milk, is especially suited for transforming even poor diets to full nutritional adequacy. This is clearly shown by the data in the table above.

Note in particular the high percentages of the dietary allowances for nutrients and the relatively low percentage of the total calories furnished by the servings of Ovaltine in milk. Thus, without unduly increasing the caloric intake, Ovaltine in milk greatly increases the contribution of nutrient essentials. Enticing flavor and easy digestibility are other important features of this dietary supplement.



Two kinds, Plain and Sweet Chocolate Flavored. Serving for serving, they are virtually identical in nutritional content.

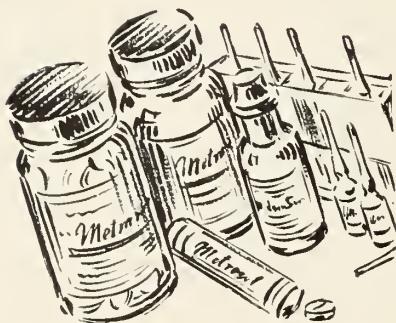
# Ovaltine

THE WANDER COMPANY, 360 N. MICHIGAN AVE., CHICAGO 1, ILL.

# for *Quick Action!*

in the Respiratory and Circulatory Emergencies  
of Intravenous Barbiturate Anesthesia.

*inject*



COUNCIL ACCEPTED

## *Metrazol*

*intravenously, intramuscularly, subcutaneously*

In respiratory and other emergencies resulting  
from medullary depression during anesthesia.  
Ampules 1 and 3 cc., tablets, solution, powder.

Metrazol, brand of pentamethylenetetrazol, Trade Mark Reg. U. S. Pat. Off., E. Bilhuber, Inc., Mfr.

## Bilhuber-Knoll Corp. Orange, N. J.



## THE WALLACE SANITARIUM

MEMPHIS, TENNESSEE

*For the Diagnosis and Treatment of  
Nervous and Mental Diseases, Drug Addiction and Alcoholism*



If she is one  
of your patients



..Your help now may spell the difference between unprovided-for old age and economic security.

Women in business who are nervous, emotionally unstable and generally distressed by symptoms of the climacteric almost inevitably experience a reduction in efficiency as well as earning power.

"Premarin" offers a solution. Many thousand physicians prescribe this naturally-occurring, oral estrogen because...

1. Prompt symptomatic improvement usually follows therapy.
2. Untoward side-effects are seldom noted.
3. The sense of well-being so frequently reported tends to quickly restore the patient's confidence and normal efficiency.
4. This "Plus" (the sense of well-being enjoyed by the patient) is conducive to a highly satisfactory patient-doctor relationship.
5. Four potencies provide flexibility of dosage: 2.5 mg., 1.25 mg., 0.625 mg. and 0.3 mg. tablets; also in liquid form, 0.625 mg. in each 4 cc. (1 teaspoonful).



While sodium estrone sulfote is the principal estrogen in "Premarin," other equine estrogens...estrodial, equilin, equilenin, hippulin...are probably also present in varying amounts as water-soluble conjugates.

**"PREMARIN"**



ESTROGENIC SUBSTANCES (WATER-SOLUBLE)  
also known as CONJUGATED ESTROGENS (equine)

**Ayerst, McKenna & Harrison Limited** 22 East 40th Street, New York 16, New York

## All worth while laboratory examinations; including—

Tissue Diagnosis  
The Wassermann and Kahn Tests  
Blood Chemistry  
Bacteriology and Clinical Pathology  
X-Ray including Gastro-Intestinal Study and Gall Bladder Visualization  
Basal Metabolism  
Pregnancy Test  
Electrocardiograms with interpretation

## National Pathological Laboratory

RALPH L. THOMPSON, M.D., Director  
601-616 University Club Bldg.  
ST. LOUIS  
Telephone Jefferson 6088

## ACCIDENT · HOSPITAL · SICKNESS INSURANCE

For Physicians, Surgeons, Dentists Exclusively



<b>\$5,000.00 accidental death</b>	<b>\$ 8.00</b>
\$25.00 weekly indemnity, accident and sickness quarterly	
<b>\$10,000.00 accidental death</b>	<b>\$16.00</b>
\$50.00 weekly indemnity, accident and sickness quarterly	
<b>\$15,000.00 accidental death</b>	<b>\$24.00</b>
\$75.00 weekly indemnity, accident and sickness quarterly	
<b>\$20,000.00 accidental death</b>	<b>\$32.00</b>
\$100.00 weekly indemnity, accident and sickness quarterly	

**Cost has never exceeded amounts shown.**  
**Also Hospital Expense for Members**  
**Wives and Children**

**85c out of each \$1.00 gross income used for members' benefit**

<b>INVESTED ASSETS</b>	<b>PAID FOR CLAIMS</b>
<b>\$3,700,000.00</b>	<b>\$15,700,000.00</b>

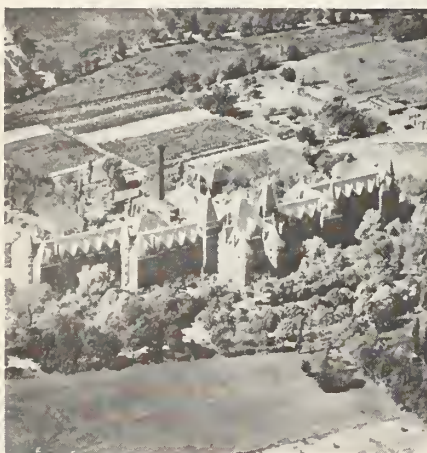
\$200,000.00 deposited with State of Nebraska for protection of our members.  
Disability need not be incurred in line of duty—benefits from the beginning day of disability

**PHYSICIANS CASUALTY ASSOCIATION**  
**PHYSICIANS HEALTH ASSOCIATION**

47 years under the same management  
400 First National Bank Building, OMAHA 2, NEBR.

# ST. VINCENT'S SANITARIUM

7300 St. Charles Rock Road—St. Louis (14), Missouri  
General Hospital Facilities; Complete, modern, approved by A.M.A. and A.C.S.



Conducted by  
**DAUGHTERS OF  
CHARITY OF ST.  
VINCENT DePAUL**

Moderate Rates

Located on 300 acres, much of which is landscaped and equipped for physical therapy. Homelike, pleasant atmosphere. Golf and tennis courts. Regulation motion pictures in auditorium. Television sets in recreation rooms.

### MEDICAL STAFF

Fifteen qualified neuropsychiatrists. (Each patient under care own psychiatrist.)

### CONSULTING STAFF

Full consulting staff.

### SPECIAL DEPARTMENTS

All modern therapies available, including **PSYCHOSURGERY**. Occupational and recreational therapies.

Affiliate School of Nursing.

Musical therapy by means of intercommunications systems. Patients whose condition permits are taken to Art museums, zoos, Municipal Opera, symphonies, sports events and other therapeutic activities.

**ACCOMMODATIONS:** Private Rooms. Private Rooms with Bath.  
Adequate classification facilities according to type and severity of illness.  
Acutely ill reside and receive treatments in air-conditioned units.

Correspondence Invited • Constructive Cases Preferred • Sister Administrator





**Throat Specialists  
report on  
30-Day Test of  
Camel smokers—**

**"Not one single case of throat irritation  
due to smoking *Camels*!"**

• Yes, these were the findings in a total of 2,470 weekly examinations of hundreds of men and women from coast to coast who smoked only Camels for 30 consecutive days! And the smokers in this test averaged one to two packages of Camels a day!



R. J. Reynolds  
Tobacco Co.,  
Winston-Salem,  
N. C.

*According to a Nationwide survey:*

**More Doctors Smoke Camels  
than any other cigarette!**

Doctors smoke for pleasure, too! When three leading independent research organizations asked 113,597 doctors what cigarette they smoked, the brand named most was Camel!

# 50 and 2

## YEARS TREATING ALCOHOL AND DRUG ADDICTION

In 1897 Doctor B. B. Ralph developed methods of treating alcohol and narcotic addiction that, by the standards of the time, were conspicuous for success.

Twenty-five years ago experience had bettered the methods. Today with the advantages of collateral medicine, treatment is markedly further improved.

The Ralph Sanitarium provides personalized care in a quiet, homelike atmosphere. Dietetics, hydrotherapy and massage speed physical and emotional re-education. Co-operation with referring physicians. Write or phone.

*The*  
**RALPH**  
**SANITARIUM**

*Established 1897*

Ralph Emerson Duncan, M.D.  
DIRECTOR



**529 HIGHLAND AVENUE • KANSAS CITY 6, MISSOURI**

Telephone Victor 3624



An artistic illustration of a human head in profile, facing right. The head is rendered in a light, almost white tone against a dark, textured background. A black nasal cast is applied to the nose. A piece of Gelfoam sponge, depicted with a porous, granular texture, is shown as if it is being applied to or has just been removed from the nasal area. The word "stay!" is written in a large, elegant serif font on the sponge.

stay!

*the stubbornest  
epistaxis  
with Gelfoam*

And in many other situations the physician and surgeon can rely on the notable hemostatic powers of Gelfoam,\* an absorbable gelatin sponge. Its biochemical clotting action rapidly controls trickling from small veins, oozing surfaces, hemorrhages following resection and capillary bleeding. Readily cut or molded to any needed shape, easily applied (with or without thrombin),

Gelfoam may be left in the wound with minimum likelihood of tissue reaction.

\*Trademark, Reg. U.S. Pat. Off.

**gelfoam**

**Upjohn**

*Fine pharmaceuticals since 1886*

**Mullen Ambulance Company**

PRIVATE AMBULANCE  
SERVICE

Local and Distant Trips  
Day or Night

5159 Delmar, ST. LOUIS      Forest 1913

**FAITH HOSPITAL**

A. J. SIGNORELLI, M.D.,  
*Medical Director*

GOodfellow 6262

2800 N. Taylor, St. Louis, Mo.

**RADIUM** (including Radium Applicators) FOR ALL MEDICAL PURPOSES  
*Est. 1919*

**QUINCY X-RAY & RADIUM LABORATORIES**

(owned and directed by a Physician-Radiologist)

W. C. U. Bldg.

HAROLD SWANBERG, B.S., M.D., Director

QUINCY, ILLINOIS

**HAMILTON-SCHMIDT SURGICAL COMPANY**

*St. Louis, Missouri*

[[ Surgical Instruments, Invalid and Sick Room Supplies ]]  
[[ Post-Operative Belts, Elastic Hosiery and Trusses Fitted ]]

Central 1680

REGISTERED NURSE IN ATTENDANCE 215 North Tenth Street

*for Fifty Years*

**PROFESSIONAL PROTECTION  
EXCLUSIVELY**

**THE  
MEDICAL PROTECTIVE COMPANY  
FORT WAYNE, INDIANA**

ST. LOUIS Office: A. W. Breckenkamp, Representative, 623 Missouri Theatre Building, Telephone Newstead 0404



# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies  
Issued Monthly under direction of the Publication Committee

COPYRIGHTED, 1949, BY MISSOURI STATE MEDICAL ASSOCIATION. ALL RIGHTS RESERVED.

VOLUME 46

DECEMBER, 1949

NUMBER 12

R. O. MUETHER, M.D., Editor  
HELEN PENN, Assistant Editor  
623 Missouri Bldg., St. Louis, Mo. Telephone, Newstead 0404-05

PUBLICATION  
COMMITTEE { R. O. MUETHER, M.D., Chairman  
V. T. WILLIAMS, M.D.  
H. E. PETERSEN, M.D.  
PAUL O. HAGEMANN, M.D.  
M. D. OVERHOLSER, M.D.

### HYPOGLYCEMIA OF THE NEWBORN INFANT

H. EWING WACHTER, M.D., *St. Louis*

THE PURPOSE of this paper is to present certain findings in studies made at the St. Louis Children's Hospital upon blood sugar behavior in newborn infants and their similarities and differences compared to the hypoglycemia of older infants and children. No attempt will be made to prove or disprove any theories and, although certain conclusions must, of a necessity, be drawn from such studies, it is hoped that thinking and discussion will be stimulated in the field of hypoglycemia and, in this manner, further knowledge of a subject which contains many unanswered problems.

One of the cardinal symptoms of low blood sugar at any period in pediatrics is that of central nervous system stimulation and no case of convulsions can be completely studied until the possibility of hypoglycemia is given due consideration. Yet, in the young infant, in whom low blood sugar values are more frequently found, a greater resistance to convulsions has been seen than in later infancy and childhood. As more and more normal newborn infants are examined and the great frequency of low blood sugar observed, it is surprising that a great many more convulsions of such origin are not seen. Relatively few cases of significant hypoglycemia are found in later infancy and childhood, but those that are seen seem to have many factors in common with newborn infants and may be considered profitably in any discussion of this subject.

As a workable clinical classification of hypoglycemia, I would like to present the following:

1. Neonatal.
2. Following intensive CHO administration.
3. Spontaneous but intermittent.
4. Persistent.

3. Spontaneous but intermittent.
4. Persistent.

All cases of hypoglycemia in infancy and childhood can be placed in one of these four groups. The first group is the main topic of this paper, the second group will be referred to later, the third group, which is also referred to as "recurrent hypoglycemia," will be discussed in connection with certain similarities between it and the newborn infant. The last group is a little understood class of infants with low blood sugars which, in my experience, has always terminated fatally. They contribute little to the understanding of hypoglycemia and will not be referred to again.

I would next like to show a schematic drawing of the major factors that are active in regulating the level of the blood glucose.

The circulating blood is represented by the space enclosed between the two parallel lines. Above this space are those factors which work toward reduc-

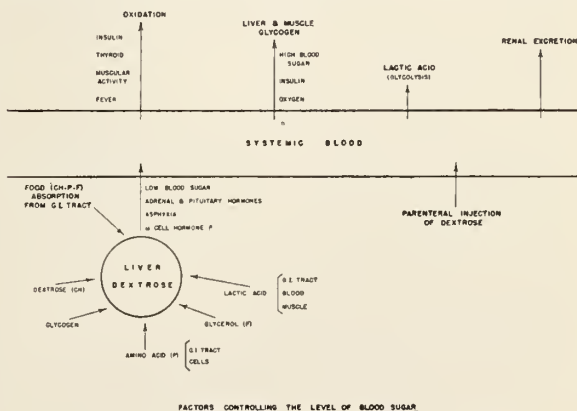


Fig. 1. Factors controlling the level of blood sugar.

From the Department of Pediatrics, Washington University School of Medicine, St. Louis, Mo.  
Presented at the 91st Annual Session, Missouri State Medical Association, Kansas City, March 27-30, 1949.

ing the blood glucose level; below are those agents which are active in elevating the glucose content. Under normal conditions, the factors are in a mobile but accurately controlled state of equilibrium. This shifts frequently in one direction or the other but

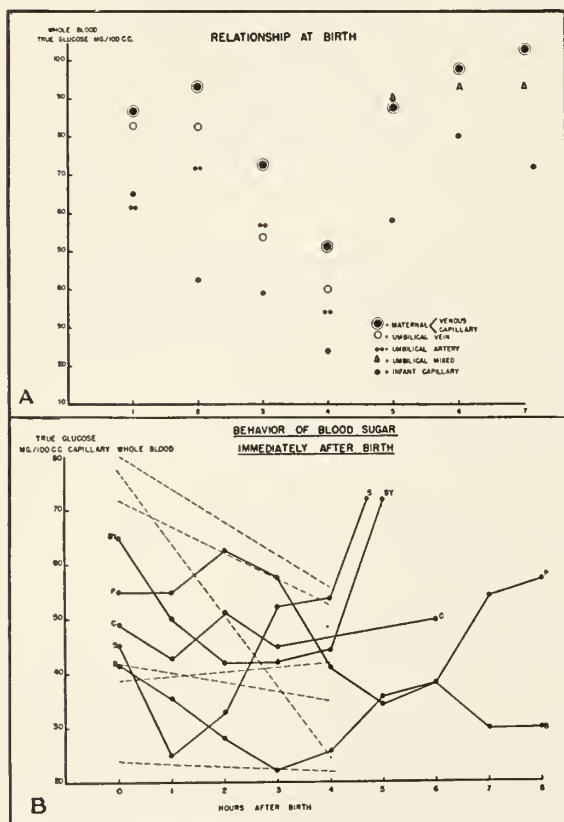


Fig. 2. A. Relationship at birth. B. Behavior of blood sugar immediately after birth.

each time the whole system under normal conditions readjusts itself quickly in order to maintain the blood sugar within certain normal limits.

Among factors which effect a lowering of the blood sugar, insulin production is one of the major controlling factors in regulating the level of blood glucose in both the normal and abnormal state and it will be helpful to have a diagram of the different conditions of insulin production which result in hypoglycemia.

#### CLASSIFICATION OF HYPOGLYCEMIA

##### I. True Hyperinsulism (Insulin Excess):

###### A. Hyperactivity of Islands of Langerhans:

1. Physiologic (induced by excessive carbohydrate intake)
2. Hypertrophy or hyperplasia (compensatory or pathologic)
3. Tumor

###### B. Insulin Administration

##### II. Relative Hyperinsulism:

###### A. Lack of Dextrose Precursor Substances:

1. Diminished absorption from gastrointestinal tract:

###### a. Starvation

- b. Loss because of vomiting, diarrhea or fistula, with and without infection (combination of diminished food intake and increased metabolism)

###### 2. Liver abnormalities (decrease in glycogen stores or mobilization)

##### B. Lack of Development or Breakdown of Regulatory Mechanism:

1. Normal newborn or premature infant
2. Endocrine imbalance: adrenal or pituitary insufficiency
3. Intracranial injury
4. Moribund state

#### III. Cryptogenic.

Group one represents all cases of hypoglycemia in which insulin production proceeds at a definitely increased rate. Group two, on the other hand, includes all cases in which the balance between insulin and available carbohydrate is upset so that the insulin factor is uppermost although actually there may be no more than the usual amount of insulin being produced. Hence there is a state of relative hyperinsulinism. Group III is relatively unimportant and consists of those few cases which do not fit into either of the first two classes.

The first group of subjects in the original classification of hypoglycemia is hypoglycemia of the neonatal period. In this group one finds four factors which influence the infant's sugar level: (1) maternal blood sugar, (2) intracranial injury, (3) adrenal injury and (4) islet cell hyperplasia and hypertrophy. I have autopsies on three infants dying in the newborn period whose pancreases showed hyperplasia of the Islet tissue. This was not adeno-

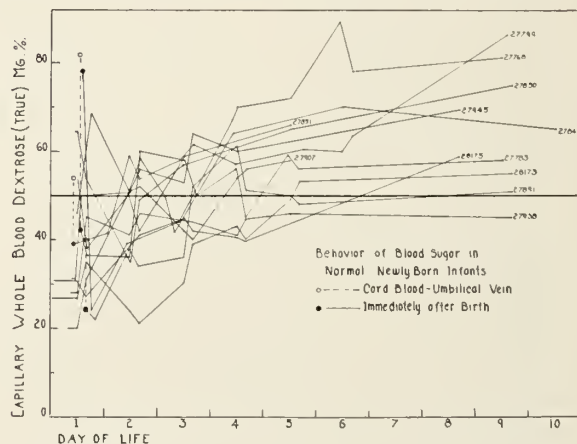


Fig. 3. Behavior of blood sugar in normal newly born infants.

matous but most certainly represented a production of excessive amounts of insulin. Adrenal hemorrhage which reduces or abolishes the production of the carbohydrate hormone, 17 Hydroxy, 11 dehydrocorticosterone, by the adrenal cortex, may give rise to alarming degrees of hypoglycemia. Injury to certain areas of the brain during delivery will pro-



duce fall in blood glucose. The intracranial injury, however, is so severe that it is the condition of primary importance and any hypoglycemia that may result is relatively less vital to the infant's welfare than recovery from the birth trauma. That the state of the maternal blood sugar exerts a definite and positive influence on the level of glucose of the infant immediately after birth is shown in figure 2A.

The levels of sugar in the mothers blood may vary from 50 to more than 100 mg. per cent but in every case the corresponding values for her infant, taken simultaneously and immediately after birth, are 20 to 30 mg. per cent lower. This is probably the most potent factor influencing the infants blood sugar at the time of delivery.

Starting with the infant blood levels at this point, immediately after birth, one can take hourly blood sugars and the resulting curves are shown in figure 2B.

The initial level varies from 25 to 70 mg. per cent, due directly to the maternal level at the time of delivery. As soon as this influence is removed, by the severing of the placental circulation, the newborn infant's blood sugar starts to fall. The fall may be great or small but in practically all cases the lowest level is reached by the end of the fifth hour. There is a great spread of those lowest levels attained, but none gave rise to clinical symptoms ordinarily attributed to hypoglycemia.

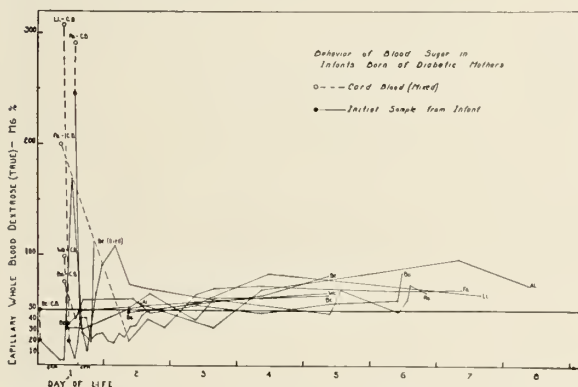


Fig. 4. Behavior of blood sugar in infants born of diabetic mothers.

If these curves are projected further and followed through the ten day stay in the nursery (figure 3), from the first day on there is a definite, though irregular, trend upward. This rise carries the infant's glucose past the 50 mg. per cent level by the sixth day in all cases save one.

The influence of the maternal blood sugar upon that of her offspring is brought into sharpest focus in cases of diabetic mothers. Here one sees the infant's glucose supply increased beyond its usual level during pregnancy and particularly during the second stage of labor. The reactions that this has upon the subsequent sugar levels of the infant after birth is shown in figure 4.

One sees initial values in excess of corresponding infants born of normal mothers (due directly to

high maternal levels) with sharper falls to lower levels following the removal of this excessive carbohydrate supply from the placental circulation. Blood levels of from 5 to 10 mg. per cent are not uncommon but in all cases recovery is spontaneous and the upward trend is seen by the second day; and by the fourth day all infants had reached a level of 50 mg. per cent or more. Without going into detail of each infant, it may be stated that no symptoms recognized as due to low blood sugar were noted and the one fatality (Be) obviously did not occur in a state of hypoglycemia, the blood level for glucose being 110 mg. per cent at the time.

It should be evident that the infant pancreas is stimulated by an excessive supply of glucose from the mother through the placental circulation and that it is unable to reduce the manufacture of insulin soon enough to keep pace with the rapid withdrawal of circulating carbohydrates and its

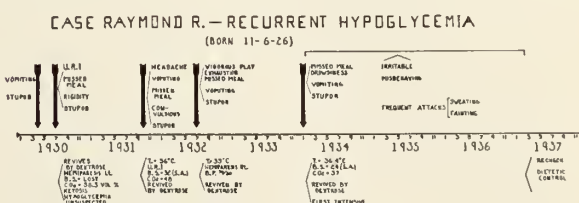


Fig. 5. Recurrent hypoglycemia.

failure of replenishment because of separation of the placenta.

This is based upon the same principle that is active in the second category of the original classification; namely, sudden withdrawal of parenteral carbohydrate administration and can best be illustrated by the following:

#### HYPOGLYCEMIA AFTER CONTINUOUS INTRAVENOUS INJECTION OF DEXTROSE

	Dextrose (C.W.B.T.) mg. per cent
Immediately before discontinuance . . .	125
One Hour after discontinuance . . . . .	92
Two Hours after discontinuance . . . . .	60
Seven Hours after discontinuance . . . . .	9
Collapse symptoms	

Patient revived by 75 cc. of 10 per cent dextrose intravenously, with later complete recovery.

These figures are for an infant who was treated for dehydration by a continuous intravenous drip of 5 per cent glucose. The fluids were discontinued after the dehydration was corrected and the blood sugar was followed for several hours thereafter. The initial blood level was high but fell rapidly during the first two hours reaching a level of 60 mg. per cent. Here one would expect the insulin production to slow in order to reestablish the normal level of glucose. However, because of the previous and prolonged beta cell stimulation by the continuous administration of sugar, the pancreas was un-

able to accomodate rapidly to the lower blood levels and insulin manufacture was continued at an excessive rate for a longer period. By the end of seven hours, the blood sugar had fallen to the alarming level of 9 mg. per cent and symptoms of collapse occurred. Parenteral glucose had to be administered

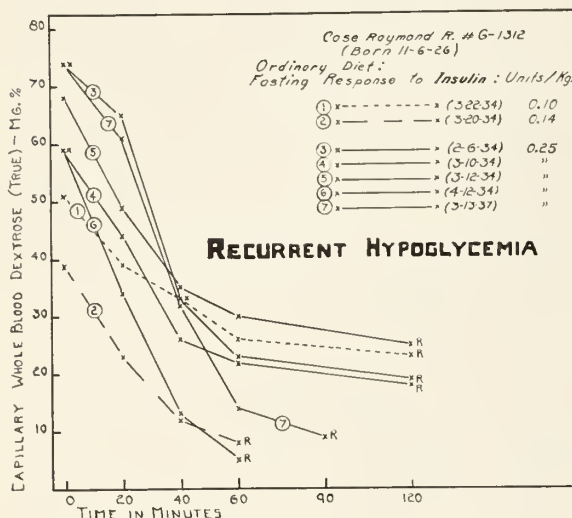


Fig. 6. Recurrent hypoglycemia.

in order to revive the infant, ultimate recovery being complete.

Although symptoms of collapse due to hypoglycemia were seen in this infant (who was 4 months old), I would like to reiterate that few newborn infants of diabetic mothers, who show low blood sugars, present symptoms of hypoglycemia nor do I feel that all cases of shock and convulsions in these infants are due to low glucose levels. Many times intracranial injury is the basis for such symptoms and if any such infant fails to respond to glucose administration, it is a good hunch that intracranial bleeding may be present.

A case of recurrent hypoglycemia, the third category in the classification, gave impetus to the studies of hypoglycemia in infancy. A brief sketch of some of these studies might further understanding of newborn hypoglycemia.

This 3½ year old boy came into the Children's Hospital in 1930 because of stupor and rigidity which followed closely the missing of a meal. Examination in the admitting room showed a mild respiratory infection, no fever and a left sided weakness. He was empirically given glucose intravenously and recovered promptly. After discharge, he remained well until 1931 when he again had convulsions and stupor following failure to eat a meal. In the hospital nothing was found except a mild respiratory infection. The blood sugar at that time was 32 mg. per cent. He was again revived by glucose and discharged. In 1932 he was admitted once more because of stupor following failure to eat. This time the findings varied only inasmuch as the hemiparesis was right sided. Glucose produced

prompt response and he was sent home. In 1934 he returned with the same history and the same findings. Glucose produced the same quick recovery and at this admission the first intensive studies of his carbohydrate metabolism were undertaken.

The first of these are seen in figure 6 which show the response of his blood sugar to the injection of ¼ unit of insulin per kilo of body weight.

One sees that the fasting blood glucose levels vary from 38 mg. per cent to 73 mg. per cent. In the first twenty minutes following injection of insulin, the levels fall from 8 to 25 mg. per cent. During the next twenty minutes they continue downward and reach as low as 12 mg. per cent in several instances. At this point the downward trend continues until symptoms of hypoglycemia are experienced. These reactions are represented by "R" at the end of each curve, showing the level of blood sugar at which reaction occurred.

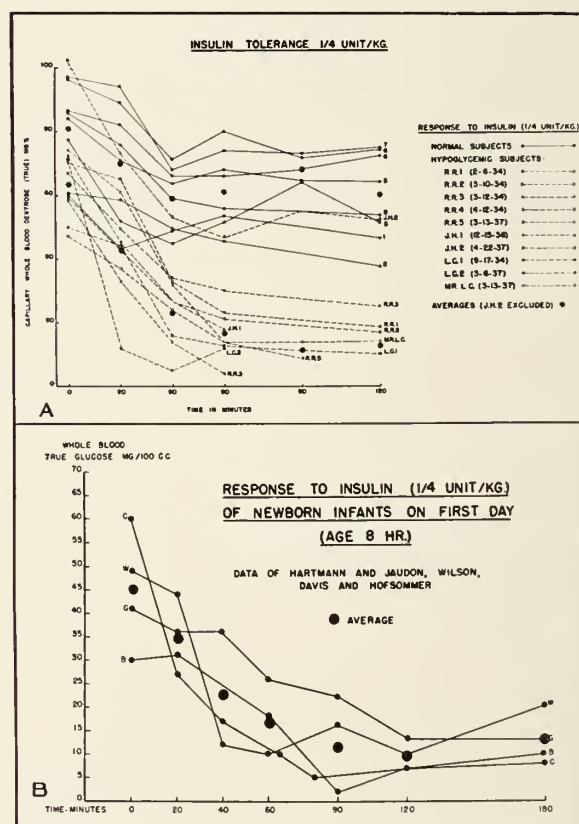


Fig. 7. A. Insulin tolerance. B. Response to insulin of newborn infants on first day.

In order that these curves may better be compared to those of normal individuals, figure 7A shows the response of blood sugar to injection of ¼ unit of insulin per kilogram of body weight in normal children represented by the solid lines and those in hypoglycemic children represented by the broken lines.

If one observes the large unconnected black dots which represent the average of all curves, it is seen



that normal children have a higher fasting blood sugar, the fall is slower and reaches its lowest level at the end of forty minutes and no reactions are seen. In contrast, the hypoglycemic curve starts at a lower fasting value and fails to level off after forty minutes, continuing down to much lower value, often ending in reaction.

If a similar test of insulin response is performed upon normal newborn infants one can see from figure 7B many similarities to the curves observed in older infants and children with hypoglycemia.

These infants were given  $\frac{1}{4}$  unit of insulin per kilogram of body weight eight hours following delivery and there was an average fasting blood glucose of 45 mg. per cent. After forty minutes the blood sugar has fallen to 22 mg. per cent but there is no leveling off at this time and the fall continues for two hours before it reaches its lowest point, 10 mg. per cent. At no time were any reactions noted.

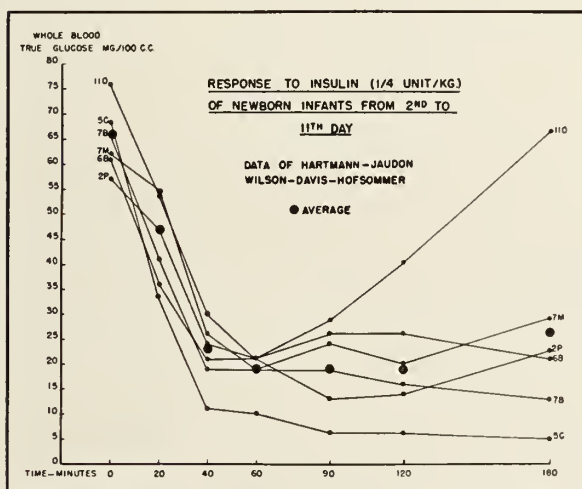


Fig. 8. Response to insulin of newborn infants from second to eleventh day.

Now if one waits a week or so and rechecks the values for these infants (figure 8) the curve becomes more like that of older infants and children. So one can see that the newborn infant, soon after delivery, demonstrates the hypersensitiveness to insulin that is found in the recurrent hypoglycemia. But rapidly, within a few days, this hypersensitive reaction tends to disappear.

The response of the blood sugar to injections of adrenalin is a phenomena in which certain abnormal variations may be observed in the study of cases of hypoglycemia. Figure 9 shows the blood sugar curves of a hypoglycemic child in response to the injection of epinephrine and also the response of the same individuals to adrenalin when insulin is given prior to the injection.

The solid lines represent the blood glucose levels at varying intervals following the injection of adrenalin. One sees an adequate rise in values with a normal return toward the fasting level. In contrast to this are the broken lines which are the

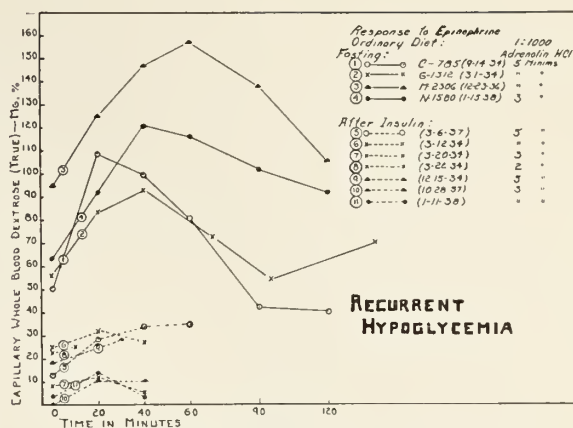


Fig. 9. Recurrent hypoglycemia.

blood sugar curves following the injection of the same amount of adrenalin when these injections of adrenalin are preceded by the injection of  $\frac{1}{4}$  unit of insulin per kilogram of body weight. A slight elevation of blood glucose results and such rises are only of short duration. In each case the response of the blood sugar to adrenalin was definitely "blocked" by the action of insulin.

Now if one returns to the newborn infant and observes the effect of the injection of epinephrine upon the blood sugar, there is a normal elevation of glucose level (figure 10B).

When the injection of adrenalin is preceded by

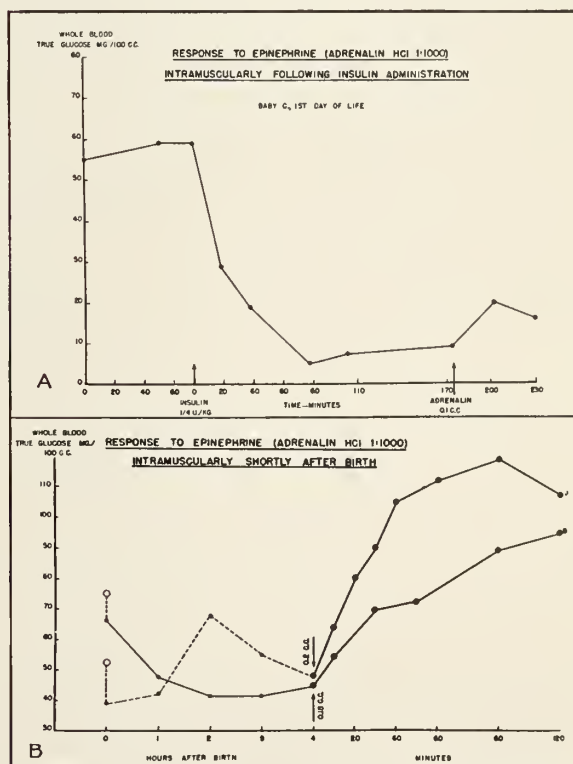


Fig. 10. A. Response to epinephrine intramuscularly following insulin administration. B. Response to epinephrine intramuscularly shortly after birth.

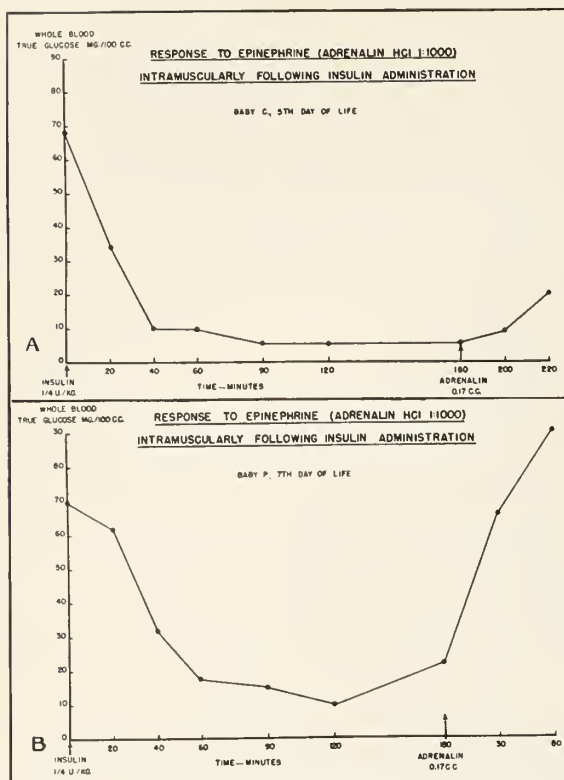


Fig. 11. A. Response to epinephrine intramuscularly following insulin administration on fifth day of life. B. Response to epinephrine intramuscularly following insulin administration on seventh day of life.

the administration of insulin as shown in figure 10A one can see that during the first twenty-four hours following delivery, the normal elevating effect of adrenalin is almost completely inhibited by the preceding action of insulin.

By the fifth day, this effect of insulin in opposing the ability of adrenalin to elevate the blood sugar is still present though not as strongly so as during the first twenty-four hours of life.

At the end of the first week insulin no longer inhibits the action of epinephrine (figure 11B) and if the later is given to infants at this time a prompt

elevation of blood glucose takes place even though a quarter of a unit of insulin per kilogram was given prior to the test.

Summing up the salient points, the young newborn infant and the recurrent hypoglycemic infant show an excessive response to insulin but the newborn infant rapidly loses this characteristic response. The same groups, that is young newborn and recurrent hypoglycemic infants show a "blocking" of adrenalin effects by insulin, but, again, the newborn infant rapidly recovers from this state. All types show a normal response to adrenalin alone.

It is quite likely that this phenomena of "adrenalin block" in the newborn and recurrent hypoglycemic infant is due to a state of hypersensitivity to insulin inasmuch as the normal response to adrenalin alone demonstrates adequate glycogen storage in the liver and a well functioning breakdown mechanism. Therefore, when adrenalin fails to set off this mechanism, it points to an overpowering preponderance of the insulin effect.

A great deal is still unknown regarding the mechanism of production of hypoglycemia, and many points must be, and in fact are, being investigated. It is not unlikely that, as more is learned about the pituitary and its action upon the adrenal and the pancreas, the solution to many of these problems will be found.

In the discussion of treatment of hypoglycemia of newborn infants, a few words will suffice. Since only a few show symptoms, only a few require treatment. In those few cases in which convulsions or stupor are observed, single injections of glucose followed by frequent feedings of sugar or milk usually will result in a permanent cure. In those cases of hypoglycemia that persist beyond the newborn period, the recurrent types discussed previously, the dietary treatment is similar to that of the newborn infants with symptoms; namely, frequent small feedings to maintain a more constant glucose level and the prevention of long fasts. The glandular and surgical treatment is beyond the scope of a paper of this type.

3720 Washington Ave.

#### NEW YORK RANKS FIRST IN HOSPITAL FACILITIES FOR POLIO

The number of hospitals in the State of New York admitting poliomyelitis patients for treatment is nearly twice that in any other state, a nationwide survey of 6,276 American Medical Association registered hospitals shows.

The survey was completed by the A. M. A.'s Council on Medical Education and Hospitals at the request of the National Foundation for Infantile Paralysis, according to a report of the council in the November 19 *Journal of the American Medical Association*.

Statistics for 1947 of the 1,243 hospitals which re-

ported that polio patients are accepted for treatment reveal that 146 of these hospitals are in the State of New York.

Texas ranked second with seventy-six hospitals admitting polio patients for treatment, and Illinois third with seventy hospitals. Pennsylvania and California followed with sixty-two and fifty-nine, respectively.

On the basis of control, 181 of the 1,243 hospitals are listed as federal hospitals, 294 under state, city or county control, 688 as church or other nonprofit associations, and eighty as proprietary hospitals.



# TRANSABDOMINAL VAGOTOMY

The Surgical Technic, Preoperative and Postoperative Care

MELVIN A. CASBERG, M.D., *St. Louis*

A NEW ERA in the treatment of peptic ulcers was introduced by Billroth in his epoch making operations on the stomach. Since that day the surgical therapy of ulcers has passed through many and varied phases, each particular phase nurtured through a period of infancy by enthusiastic supporters and then in its maturity either functioning as a milestone toward the solution of the problem involved or relegated to medical anonymity.

In 1943 the studies of Dragstedt and Owens<sup>10</sup> on the effect of resection of the vagus nerves in cases of peptic ulcer stirred up a great interest in this approach to the problem. During the last four years medical literature, especially the American, has been carrying on the discussion, debating the relative value of this procedure as compared with other accepted surgical therapy. Larger and larger series are being reported with an increasing tendency to accept vagotomy when medical treatment proves ineffective. Crile<sup>7</sup> now reports 288 transabdominal vagotomies and states that this operation "has proved safer and more effective than gastric resection and since removal of three fourths or more of the stomach is an irreversible procedure which cannot be altered even if it produces incapacitating symptoms, it would appear that vagotomy is the conservative method of treatment and that gastric resection is unnecessarily radical."

Intensive research on the results of vagotomy as manifested by altered gastric and duodenal physiology has been presented in the current medical journals,<sup>8 9 10 12 20 21 26</sup> however, most authors are agreed that a major factor in the evaluation of this operation as a solution to the ulcer problem is that of time. The argument of the opposition in this controversy is not that symptoms are not relieved but rather as to whether the results are permanent. It is of interest to note that Dragstedt has now been performing vagotomies for six years, with a total of over 400 cases, without observing recurrences in patients who have had complete vagus denervation. An editorial in the *Journal of the American Medical Association* of August 21, 1948, estimates that approximately ten thousand vagotomies had been performed to date. Only as these case histories are followed through the coming years and then studied carefully as to the end results can this form of therapy be evaluated fully.

In the performance of vagus nerve section a certain basic uniformity is essential in order that the future calculation of the efficacy of this type of surgery may be more accurate. Herein lies the purpose of this presentation with an emphasis on certain necessary fundamentals. While it is true that

the type of abdominal incision is of no great significance in the final tabulation, yet it is of the utmost importance to the analyst that the completeness of the vagotomy be established. Altogether too many surgeons are performing vagotomies without adequate preoperative and postoperative study. If one assumes the responsibility of carrying out a surgical procedure which may be considered still in the experimental stage, then it is obligatory that certain basic facts be ascertained. Does the patient have a demonstrable ulcer? Is the ulcer of the penetrating, perforating or hemorrhaging type? Where does the ulcer lie? Following surgery does insulin induced hypoglycemia produce a change in the degree of acidity? All of the answers to these questions should be recorded for the future accurate interpretation of results.

Contemporary medical literature<sup>1 4 8 9 12 14 15 16 17 19 20 21 25 26</sup> covers in a detailed manner the historic background of vagotomy as well as the anatomy and physiology of the vagus nerves and the indications for vagus section. It is the purpose of this paper to discuss the technic of transabdominal vagotomy and the basic preoperative and postoperative investigations in such a manner as to emphasize the necessity for a certain fundamental uniformity.

Controversial subjects will be presented only to that extent to which they aid in the clarification of the main thesis.

## BASIC PREOPERATIVE STUDIES

1. *Evaluation of X-Ray Studies.*—At the expense of being considered facetious one might bring up the question as to whether the candidate for vagus section has a demonstrable ulcer. Certainly duodenal bulb deformity or spasm are not in themselves sufficient evidence to warrant a diagnosis of peptic ulcer, for it is a known fact that biliary or pancreatic pathologic conditions may well produce such changes. In the light of future evaluation it is important that an ulcer be demonstrated before a diagnosis be made, otherwise the case history tends to become invalid.

The second point of importance to be determined by the x-ray is the patency of the duodenum at the ulcer site. In the presence of obstruction with gastric retention of any degree it is wise to perform either a supplementary gastroenterostomy as advocated by Dragstedt<sup>9</sup> or a pyloroplasty as performed by Crile.<sup>7</sup>

2. *Evaluation of the Response of Gastric Acidity to Insulin Hypoglycemia.*—During surgery one cannot ascertain with certainty that all vagus fibers have been sectioned; hence it is important that efforts be made to determine the completeness of this

Associate Professor of Surgery, St. Louis University School of Medicine, St. Louis.

procedure. Investigators<sup>13 18</sup> have shown that insulin induced hypoglycemia provokes increased gastric secretion by stimulation of the vagal center. This action is abolished by total vagus section and thus the insulin test affords a fairly reliable means of determining the completeness of surgery.

Walters<sup>26</sup> contends that either the Hollander test is not always accurate in indicating the completeness of vagus nerve resection or a complete section is not necessary to obtain results comparable to those in which the tests are negative. At the

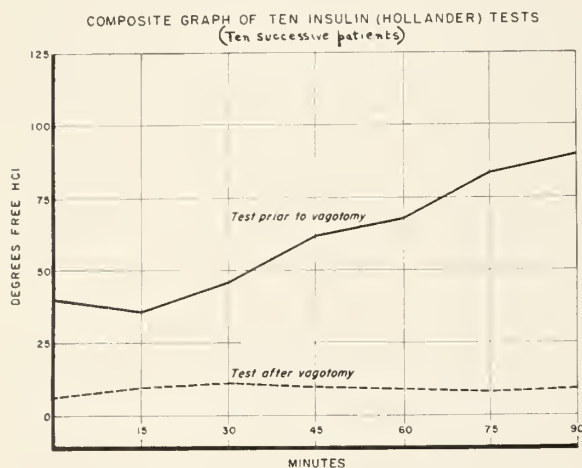


Fig. 1. This composite graph of ten successive vagotomy patients shows the usual preoperative and postoperative response to the insulin test. Note the initial fall in degrees free HCl in the preoperative test which in certain cases may be quite marked.

forum on fundamental surgical problems presented at the American College of Surgeons Clinical Congress in October 1948, McCorriston from the department of Surgery at McGill University described a new parasympathetic stimulant, ethyl 3:3 dimethylallyl barbituric acid. This drug is a powerful stimulant to gastric secretion, particularly stimulating the acid and mucous cells of the stomach and, furthermore, its action is central and prevented by vagotomy. This eventually may supplant the Hollander test to determine the completeness of vagotomy.

Though the postoperative performance of the insulin test is of primary importance, the procedure is discussed in the preoperative phase as it also should be carried out before surgery in order to afford a comparative value. Figure 1 shows a composite graph of ten successive vagotomies comparing the preoperative and postoperative response to hypoglycemia.

Crile<sup>7</sup> feels that a pyloroplasty or a gastroenterostomy invalidates the insulin tolerance test because of bile regurgitation. However, regardless of neutralization by duodenal fluid one will find a certain degree of acid increase where the vagi are intact if the blood sugar is lowered adequately by insulin and the gastric contents rather thoroughly evacuated at each aspiration. Colp<sup>6</sup> in a compara-

tive study of subtotal gastrectomy with and without vagotomy has shown a demonstrable acid decrease in the former.

Griswold<sup>11</sup> presents a selective surgical therapy of duodenal ulcers based on a differentiation between the humoral and vagal factors. Tests utilizing histamine and insulin are made preoperatively with a study of the comparative response to humoral and vagal stimulation and the operative procedure is then modified by these results, a subtotal gastric resection being performed if the response is predominately humoral and a vagotomy if predominately vagal. Future reports of this research will be of great interest.

The procedure is carried out as follows: The patient takes nothing by mouth after midnight of the night preceding the operation. At 8:00 a.m. a 14F Levine tube is passed through the nose into the stomach and the fasting contents aspirated for analysis. At the same time a blood sugar determination is made. Forty units of unmodified insulin are placed in 500 cc. of saline solution and an intravenous infusion commenced. Blood sugar and gastric acidity determinations are estimated every fifteen minutes until the blood sugar has fallen to 50 mg. per cent, at which reading the infusion is discontinued. Two further fifteen minute gastric aspirations are analyzed. Glucose solution should be available for intravenous administration to combat possible hypoglycemia. These results are graphed for the patient's record.

3. *Psychosomatic Evaluation.*—The importance of emotional factors in the etiology of peptic ulcers is unquestioned, and yet how few case histories include a bare minimum of information with regards to this factor. Whereas it is not advocated that every prospective vagotomy patient be psychoanalyzed, it is felt that a general estimation of the psychosomatic factor should be made. One should evaluate the periodicity of ulcer symptoms and their relationship to mental stress and strain in order to determine the importance of the cephalic phase of ulcer etiology. The best result of vagus nerve resection should be found in that patient who precipitates ulcer symptoms at major or minor nervous crises. These recorded facts will be of definite importance to the future analyst who attempts to determine the value of this surgical procedure and one need not be a psychiatrist to obtain this relevant data.

Szasz<sup>23</sup> has made a study of the psychiatric aspects of vagotomy and those performing this type of surgery should familiarize themselves with this work.

In the selection of cases for vagus resection it has been my policy to study each patient jointly with an internist, preferably the one who has been supervising the medical therapy of the ulcer, in order that the emotional background might be clarified. This method of choice results in a rational approach to the problem and insures the institution of adequate conservative or medical therapy prior to surgery.

It is important to remember that most ulcer pa-



tients have been on restricted diets and as such must be considered as deficient in certain essential nutritional elements. This is especially true of the ulcer case that has hemorrhaged. Regardless of the results of laboratory tests it is wise to place these patients on high protein, high vitamin diets for at least one week before surgery. Those cases having suffered repeated hemorrhages must have adequate blood transfusions to raise the blood elements to normal levels.

#### SURGICAL TECHNIC

In the literature on transabdominal vagotomy one finds advocates of various incisions, each with valid reasons for a particular approach. Thorek<sup>24</sup> uses a muscle splitting left rectus incision which extends from the left xipho-costal notch to a point from 3 to 5 centimeters below the umbilicus. Dragstedt<sup>9</sup> and Crile<sup>7</sup> feel that a midline incision extending from the xiphoid to the umbilicus affords a better exposure, is less vascular and easier to open and close. Weinberg<sup>29</sup> reporting on one hundred and fifty cases utilizes a transverse incision. Though my original approach was through the midline, it has since been changed to a transverse incision extending from rib margin to rib margin, transecting both recti muscles at a level midpoint between the xiphoid process and the umbilicus. The only disadvantage found to this method is that it requires more time to open and close. However, the advantages of good exposure and the postoperative comfort to the patient outweigh the slight prolongation of operative time. Pulmonary complications are more frequent after upper abdominal surgery and this is due in part to the low amplitude of respiration secondary to the pain induced by breathing. A transverse abdominal incision causes less postoperative distress both from respiratory excursions and from general body motions, which factor is of importance in lowering the incidence of complications.

After entering the peritoneal cavity an appraisal of the upper abdominal viscera is made with special attention given to the ulcer site, for the results of this evaluation coupled with the information presented by the x-ray studies performed preoperatively will determine the necessity for or against the addition of a gastroenterostomy. Dragstedt<sup>9</sup> suggests that the patency of the duodenum at the ulcer site may be determined by passing the Levine tube which is present in the stomach through the pyloric sphincter. Realizing the close embryologic and physiologic correlation of the duodenum, hepatobiliary system and the pancreas, it is important that this functional unit be examined thoroughly for a possible bearing on future therapy.

On completion of the exploration, the surgeon's next problem is that of exposing the esophagus as it passes through the hiatus of the diaphragm. Time spent in making this area accessible is most worthwhile, especially in the light of the necessity for a complete vagotomy. The first structure encountered in the approach to the surgical field will be the left

lobe of the liver which lies anterior to the gastroesophageal junction. Occasionally division of the left triangular ligament of the liver, with inferior, anterior and lateral (right) retraction of the left lobe, enhances exposure. Usually this is unnecessary and a broad malleable retractor protected by a moist laparotomy pad is sufficient to displace the

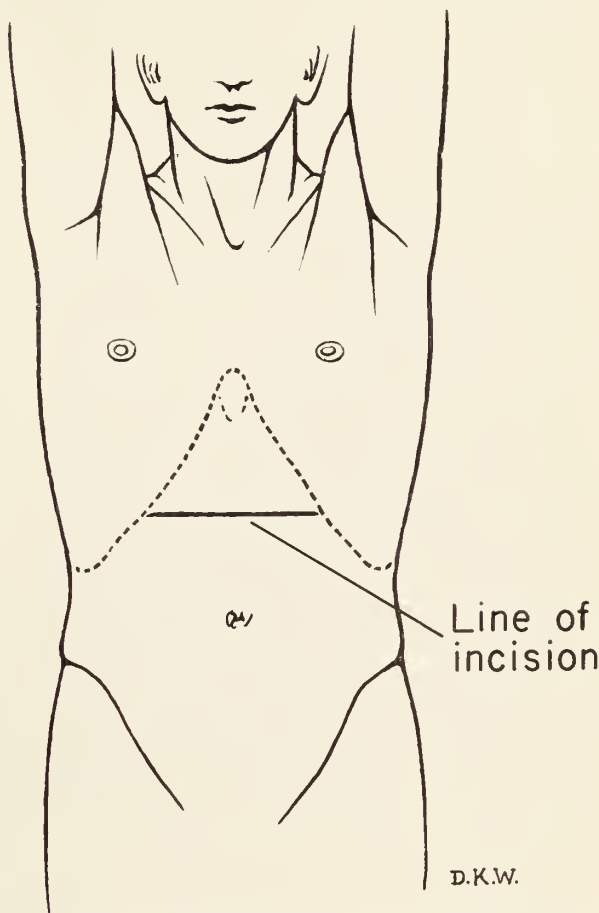


Fig. 2. The transverse upper abdominal incision, while more time consuming, affords a better exposure to the surgeon and greater postoperative comfort to the patient.

lobe of the liver for adequate exposure. Weinberg,<sup>29</sup> who designed a retractor specifically for the retraction of the liver in this operation, feels that better exposure is obtained if the triangular ligament is not divided.

The spleen is packed laterally (left) and the anterior portion of the stomach is covered by a moist gauze pad which is used by the assistant to displace the gastric fundus and corpus inferiorly. This last maneuver places traction on the esophagus which facilitates the further dissections by the surgeon. A deep retractor of the Foss biliary duct type, or Babcock gallbladder type, with light attached when introduced from the superior margin under the diaphragm not only illuminates a deep operative field but also elevates the diaphragm. Finally, with the placing of a square bladed retractor of the

Kelly type in the left lateral angle of the wound, the surgeon should have adequate exposure to continue with the identification and resection of the vagus nerves.

The peritoneum, sweeping from the anterior esophageal surface superiorly onto the inferior surface of the diaphragm, is picked up and a transverse incision made exposing the longitudinal muscle fibers of the esophagus. Careful blunt finger dissection extending around the esophagus and occasionally up through the diaphragmatic hiatus into the inferior mediastinum will mobilize the esophagus sufficiently to transmit a tautness to the vagi when

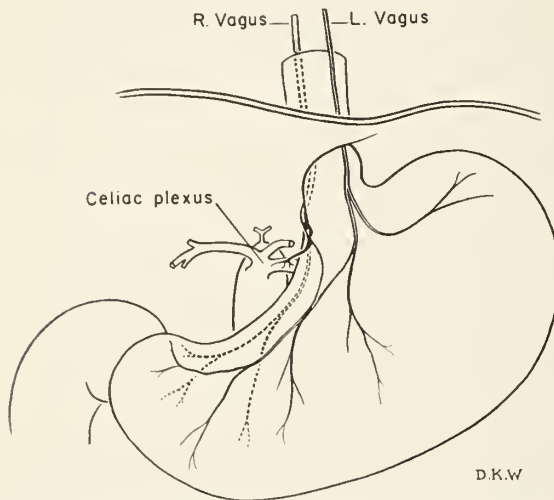


Fig. 3. The average relationship of the right and left vagus nerves as determined by eighteen dissections.

inferior traction is placed on the stomach. The Levine tube introduced into the stomach preoperatively aids in the identification of the esophagus. One must handle the esophagus with care because the muscular wall, devoid of peritoneal protection, is thin, friable and may be injured rather easily by rough handling. I no longer use gauze or rubber passed around the exposed esophagus as a means of directing traction inferiorly for inadvertent tension has resulted in tears through the muscle fibers.

Because of the importance of sectioning all nerve fibers for a successful result, it is imperative that the surgeon contemplating this procedure be familiar with the anatomy of the vagus nerve. Whereas the mediastinal or thoracic vagi form plexuses with numerous ramifications, they tend to unite into single anterior and posterior trunks as these approach the diaphragmatic hiatus preparatory to entering the abdominal cavity. Bradley and his co-workers<sup>4</sup> dissected one hundred adult cadavers and came to the conclusion that in 90 per cent of cases a transabdominal approach will permit complete division of the vagi.

Chamberlin and Winship<sup>5</sup> after fifty dissections grouped the vagal arrangements into three: (1) the simple or basic pattern which made up 60 per cent, in which single primary trunks formed from

the anterior and posterior plexuses as they passed through the hiatus; (2) the intermediate pattern which comprised 16 per cent, in which single trunks formed from the plexuses but divided again into two or more secondary trunks before entering the hiatus; (3) the complex pattern made up 24 per cent and in these cases there were two or more primary trunks.

From these same dissections the authors concluded that in 86 per cent of the cases the nerves were palpated easily whereas in the remaining 14 per cent their obscurity required meticulous dissection to insure complete vagus section.

Eighteen dissections which I have made have demonstrated in concurrence with the previous anatomic discussions that the right vagus nerve which is distinctly larger than the left and rather loosely attached runs along the posterior surface of the right half of the esophagus as it passes through the hiatus and then usually deviates to the right to lie along the right border of the esophagus or even in the gastrohepatic ligament away from the esophageal musculature.

The left vagus trunk which is attached rather intimately usually will be found on the anterior surface of the esophagus and it has been my experience that in the majority of cases the trunk divides into two secondary branches just inferior to the hiatus. It is most uncommon to find any vagus fibers over the left half of the posterior surface of the esophagus, an anatomic point of aid in those difficult cases in which meticulous and detailed search is required to locate the nerve fibers. Jackson<sup>14</sup> has made an anatomic study of the vagus nerves and presents photographs and drawings of dissections which are in general accord with other studies of a similar nature. He suggests a selective vagus resection with preservation of the vagus supply to the spleen, kidneys, adrenals, part of the pancreas, the small intestine below the first portion of the duodenum, the colon and part of the liver. This procedure has been carried out in sixteen cases, checked by insulin tests and has been found to be technically feasible.

During the esophageal mobilization by blunt scissors and finger dissection, care must be taken not to dislocate the vagus trunks, especially the right, away from the esophagus.

After identification of the individual nerve trunk it is stripped and freed for a distance of from 3 to 4 centimeters and then divided between ties 2 to 4 centimeters superior to the stomach. If there is any difficulty encountered in identifying the trunk on the right, search should be made in the gastrohepatic ligament, for the nerve is displaced easily away from the esophageal wall while this latter structure is being freed by blunt finger dissection. As a final maneuver, the anterior surface of the esophagus should be inspected minutely for any remaining branches of the left vagus nerve.

The peritoneum overlying the esophagus may be sutured, though this is not an essential procedure



for the left hepatic lobe falls back into position and effectively covers the operative field. Some surgeons<sup>29</sup> avoid closing the peritoneum for fear that accumulating serum and oozing blood might collect in the mediastinum. Not only is the suturing of the left coronary ligament technically most difficult but also unnecessary for the liver maintains its position regardless of this suspensory factor as has been shown by postmortem findings.<sup>24</sup> Two or three pledgets of gelfoam may be molded about the esophagus in its exposed portions both to control any venous oozing and also to seal potential spaces leading into the mediastinum. This last factor assumes a more important role in the presence of a gastroenterostomy.

If, from the x-ray studies and the examination at the time of surgery, there is evidence of obstruction a gastroenterostomy is performed and the abdomen closed in layers without drainage.

#### POSTOPERATIVE CARE AND STUDIES

Dragstedt<sup>9</sup> has emphasized the necessity of keeping the stomach empty with continuous suction for the first four or five days. This is the single most important factor in the postoperative care of the vagotomized patient. The sudden deprivation of muscle tone produced by surgery results in a stomach which cannot cope with gastric contents whether these be extrinsic or intrinsic in origin. Prevention of this overdistention permits a more rapid adjustment in the motor mechanism toward normality. The surgeon who realizes this simple fact and acts accordingly prevents not only the immediate postoperative complications but, even more important, decreases or eliminates the more persistent complications such as a sense of epigastric fullness and frequent eructations. It is wise to insure the patient's cooperation by taking time to explain the temporary gastric paralysis and the necessity for the nasal tube.

The tube is clamped two hours at a time commencing on the morning of the fourth postoperative day and four hours at a time that afternoon and evening, checking the amount of residual after each period. The patency of the tube must be determined when suction is resumed. The tube is clamped throughout that night and the stomach decompressed on the morning of the fifth day, after which the tube is removed. One ounce hourly liquid feedings are given throughout the day and a final gastric aspiration performed that night. If the residual is less than 100 cc. the tube is withdrawn. During the following days one should not hesitate to perform a gastric decompression should there be any evidence of overdistention, for it is better to err on the side of passing a tube needlessly than to permit the hypotonic gastric musculature to be overstretched.

Parenteral feedings during this five day period must be calculated to meet individual requirements and should include adequate amino acids, glucose and vitamins. Owing to the loss of chlorides by con-

tinuous gastric suction, it is important that proper salt balance be maintained. There, perhaps, is a tendency on the part of surgeons to flood the system with an overdose of saline rather than to permit a depletion of the blood chlorides. Numerous methods of estimating the salt requirements are practiced; however, in case of doubt one should not hesitate to determine blood chloride level.

The liquid feedings by mouth on the fifth postoperative day are changed on the sixth day to fre-

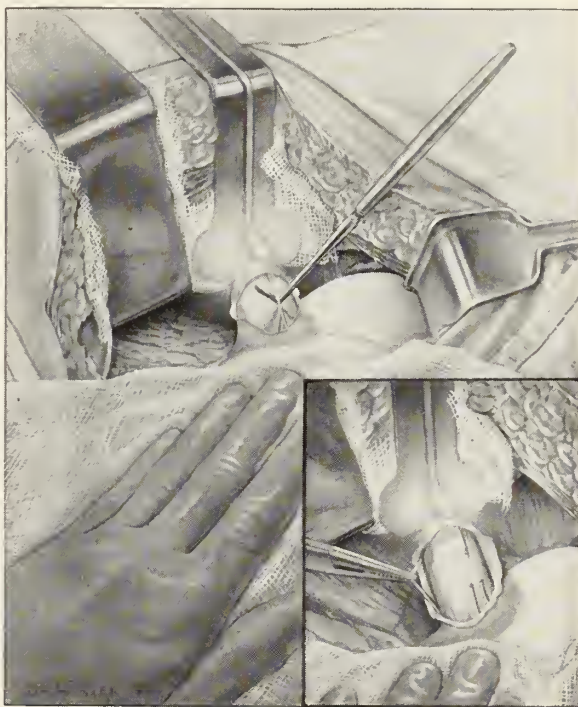


Fig. 4. Exposure of the operative field and relationship of the left vagus nerve on the anterior aspect of the esophagus. Insert. The left vagus nerve has been sectioned and the right vagus nerve identified.

quent small portions of a bland soft diet such as is used following gastric surgery. Though it has been the custom to maintain the vagotomized patient on a convalescent Sippy diet for approximately one month after operation, I am of the opinion that the quantity of food is much more important than the quality. A regimen of six small meals a day is usually the optimum feeding interval. The patient is warned to reduce the quantity of food if he feels distended.

Szasz,<sup>23</sup> feels that following a vagotomy an "abrupt discontinuation of medical measures may be psychologically harmful to these as well as to many other patients." Continuing, he advocates that "patients be permitted to continue with such medical measures for some time following vagotomy and, if need be, indefinitely." Though there probably are certain patients who are better treated according to the former method, it would seem that these certainly are in the minority. More frequently patients who have been on a strict dietary regime for

months or years are delighted to find that their dietary horizons have expanded. Two vagotomy patients with long ulcer histories struck up a close friendship while in the hospital and on release commenced a competitive game of eating and drinking foods denied them for years. The supreme test was applied, unknown to me until later, when they met in a Spanish Restaurant and each consumed a large bowl of chili con carne without any dire after effects. This incident is related not to condone it but rather to illustrate the mental attitude of a good proportion of vagotomized patients.

Early ambulation is practiced in these cases just as in other types of upper abdominal surgery. The nasal tube is clamped and disconnected from the suction apparatus for twenty minutes at a time without fear of injury but the nurse or patient always checks the patency of the tube when it is reconnected.

Approximately two weeks after surgery the Hollander<sup>13</sup> insulin test is carried out to determine the completeness of the vagus nerve section. At the expense of being repetitious, the importance of ascertaining and recording the presence or absence of gastric acid response to this test is reemphasized.

One month following vagotomy an upper gastrointestinal x-ray examination is indicated both for the purpose of determining the status of the peptic ulcer and also the gastric muscle tone and emptying time. It is wise to repeat this examination every six months for a period of two years.

#### COMPLICATIONS

Postoperative complications following vagotomy have been reported by numerous writers and range from mild symptoms of epigastric fullness to perforation of the ulcer and death.<sup>27, 28</sup> The most common complaint and one which is usually mild in degree is that of frequent eructations. This condition is accompanied by a sense of upper abdominal distention and is secondary to gastric atony. If the surgeon has not permitted overdistention in the immediate postoperative period, this complication usually will disappear within six months. Some reports stress the foul odor of the belching but I have rarely noted this complication and neither the patients nor their relatives have complained of this condition. Familiarity with the cause of this distress usually enables the patient to control it and so far I have not found it necessary to administer urecholine to increase the motor activity of the vagotomized stomach.

Diarrhea following vagus nerve section, though reported as a common complication, is seldom of a serious nature.<sup>3</sup>

A peculiar syndrome simulating the hypoglycemic state occasionally manifests itself with weakness, tremors, nervousness and hyperhidrosis. The patient soon determines that this state develops several hours after meals and is controlled readily by taking carbohydrates. The exact mechanism in the precipitation of these symptoms is unknown but

may be linked with the elimination of the parasympathetic nerve supply to the pancreas resulting in an imbalance of insulin production and low level of blood sugar. Further studies in carbohydrate metabolism in the vagotomized patient are indicated.

A sterile pleural effusion occasionally develops following transabdominal vagotomy. This involves the left pleural cavity more frequently than the right and is due to the proximity of the pleura to the field of surgery. On only one occasion in twelve operations was it necessary to tap the chest cavity and this was done because the patient had a slight temperature elevation and it was thought best to examine the pleural fluid which proved to be sterile.

Perforation of an ulcer following vagotomy has been reported by several authors.<sup>7, 26</sup> Weeks and his coworkers<sup>28</sup> discuss two deaths associated with supradiaphragmatic vagotomy, one of which died on the operating table during manipulation of the vagus. The other patient underwent a vagotomy and left thoracolumbar sympathectomy. Fifteen days after this second operation the patient died of a perforation of his duodenal ulcer. This death hardly can be attributed to the vagotomy for the two surgical procedures were physiologically antagonistic, the sympathectomy neutralizing the effect of the vagus nerve section.

Intestinal obstruction following vagotomy due to inspissated barium is a rare complication indeed and yet is mentioned as a warning to the surgeon who might not give this possibility a thought. Recently I was called in consultation on a case in which this complication had developed and had required further surgery as a life saving measure. The slowing down of the proximal portion of the intestinal tract following vagus nerve section permits a fecal bolus impregnated with barium to develop into an obstructive hazard. One should be certain prior to surgery that the barium has all been eliminated.

Beal<sup>2</sup> reports a case of subdiaphragmatic vagotomy complicated ten days postoperatively by a paraesophageal diaphragmatic hernia. He suggests that in view of this fact the esophageal hiatus be repaired with silk sutures.

#### DISCUSSION

Incomplete vagotomy causes little change in gastric physiology and as such is of no permanent value in the treatment of peptic ulcer.<sup>20</sup> Stevens<sup>22</sup> while admitting this statement presents a group of cases in which he has performed a conservative gastric resection with partial vagotomy, stating that the purpose of this procedure is to attack both the hormonal and the nervous phase of the secretion of gastric acid. This work is mentioned in order to emphasize that such cases, while of experimental interest, should not be included in the evaluation of primary vagotomy.

According to personal communications from surgeons performing vagotomies and recent literature



on this subject, gastroenterostomies are being performed almost routinely as supplementary procedures. It is difficult to concur with this trend for several reasons. First, unless there is an actual obstruction another gastric stoma will not necessarily facilitate the emptying of the stomach. Gastric retention following vagus nerve section is due to a partial muscular paralysis. This is illustrated by a case in which a vagotomy and a partial gastrectomy after the method of Polya was performed on a patient with a benign prepyloric ulcer. The postoperative course was uneventful and the patient was discharged on the tenth day. Two weeks later, on Thanksgiving Day, contrary to his better judgment and my instructions there was a quantitative dietary indiscretion with a resultant acute gastric dilation requiring three days of hospitalization with constant Levine tube suction. X-rays taken at the time of discharge showed a large functioning dependent stoma with no evidence of narrowing of the efferent jejunal loop. This incident occurred more than one year ago and, having learned this lesson, the patient has had no further complications.

Another argument against a routine supplementary gastroenterostomy is the resultant confusion in the analysis of vagotomy as a therapeutic measure against peptic ulcer, for each of these surgical procedures has been used in its own right in the treatment of this problem. Gastroenterostomy alone will often give reasonable comfort for several years, at least until a marginal ulcer complicates the picture.

Wangensteen in discussing a paper on vagotomy by Colp<sup>6</sup> states that the protection against ulcer formation afforded by vagotomy is due in part to the delay in gastric emptying resulting in the continual presence of food in the stomach. Thus, according to this view, a gastroenterostomy or partial gastric resection tends to neutralize the protective action of the vagotomy.

If the surgeon is convinced that there is present a degree of obstruction or has reason to believe that with the healing of the ulcer there will be significant narrowing of the lumen, a short circuiting operation is imperative to prevent future problems and possible further surgery.

#### SUMMARY

The technic of transabdominal vagotomy as well as the preoperative and postoperative care and studies are discussed. The responsibility of the surgeon who undertakes this relatively new therapeutic

procedure is emphasized with special reference to the desire for a certain basic uniformity of patient examination and therapy in order to facilitate the future evaluation of this operation.

1402 S. Grand Ave.

#### BIBLIOGRAPHY

1. Alvarez, W. C.: Sixty Years of Vagotomy; a Review of Some 200 Articles. *Gastroenterol.* **10**:413-441 (March) 1948.
2. Beal, John M.: Diaphragmatic Hernia Following Subdiaphragmatic Vagotomy. *Surg.* **24**:625-627 (October) 1948.
3. Bergman, Philip A.; French, S. W., and Seelye, Sam F.: Experience with Vagotomy in the Treatment of Peptic Ulcer. *Mil. Surg.* **104**:331-336 (May) 1949.
4. Bradley W. F., et al.: Anatomic Considerations of Gastric Neurectomy. *J. A. M. A.* **133**:459-461 (February 15) 1947.
5. Chamberlin, J. A., and Winship, T.: Anatomic Variations of the Vagus Nerves—Their Significance in Vagus Neurectomy. *Surg.* **22**:1 (July) 1947.
6. Colp, Ralph, et al.: A Comparative Study of Subtotal Gastrectomy With and Without Vagotomy. *Ann. Surg.* **128**:470-478 (September) 1948.
7. Crile, George, Jr.: The Surgical Treatment of Peptic Ulcer. *Surg. Clin. N. America* **1123**-1137 (October) 1948.
8. Dragstedt, L. R., and Schafer P. W.: Removal of the Vagus Innervation of the Stomach in Gastroduodenal Ulcer. *Surg.* **17**:742-749 (May) 1945.
9. Dragstedt, L. R., et al.: Transabdominal Gastric Vagotomy. *Surg., Gynec. & Obst.* **85**:461-466 (October) 1947.
10. Dragstedt, L. R., and Owens, F. M.: Supra-Diaphragmatic Section of the Vagus Nerve in Treatment of Duodenal Ulcer. *Proc. Soc. Exper. Biol. & Med.* **53**:152-154, 1943.
11. Griswold, R. Arnold: A Rationale for the Surgical Treatment of Duodenal Ulcer. *Surg. Gynec. & Obst.* **88**:585-591 (May) 1949.
12. Harkins, H. N., et al.: Symposium on Vagotomy for Peptic Ulcer. I. Experimental Observations. *Bull. Johns Hopkins Hosp.* **81**:79-91 (August) 1947.
13. Hollander, Franklin: The Insulin Test for the Presence of Intact Nerve Fibers after Vagal Operations for Peptic Ulcer. *Gastroenterol.* **7**:607-614, 1946.
14. Jackson, Richard G.: Anatomic Study of the Vagus Nerves. *Arch Surg.* **57**:333-352 (September) 1948.
15. Kretschmar, L. H.: Vagotomy. *Wis. M. J.* (August) 1947.
16. Meyer, K. A.; Rosi, P. A. and Stein, I. F., Jr.: Studies on Vagotomy in the Treatment of Peptic Ulcer. II. Clinical Evaluation. *Surg., Gynec. & Obst.* **86**:524-529 (May) 1948.
17. Moore, F. D., et al. Transdiaphragmatic Resection of the Vagus Nerves for Peptic Ulcer. *New England J. Med.* **234**:241-251 (February 21) 1946.
18. Okada, et al.: Pancreatic Function: IV. The Humeroneural Regulation of the Gastric, Pancreatic and Biliary Secretions. *Arch. Int. Med.* **43**:446, 1929.
19. Priestley, J. T.: Some Physiologic Aspects of the Surgical Treatment of Duodenal Ulcer. *Surg. Clin. N. America*, **905** (August) 1947.
20. Stein, I. F., Jr., and Myer, K. A.: Studies on Vagotomy in the Treatment of Peptic Ulcer. *Surg., Gynec. & Obst.* **86**:473-479 (April) 1948.
21. Stein, I. F., Jr., and Myer, K. A.: Studies on Vagotomy in the Treatment of Peptic Ulcer. *Surg. Gynec. & Obst.* **87**:188-196 (August) 1948.
22. Stevens, Arnold: Treatment of Duodenal Ulcer by Conservative Gastric Resection with Partial Vagotomy. *California Med.* **69**:252-254 (October) 1948.
23. Szasz, T. S.: Psychiatric Aspects of Vagotomy: A Preliminary Report. *Ann. Int. Med.* **28**:279-288 (February) 1948.
24. Thorek, P.: Vagus Nerve Section (Vagotomy) in the Treatment of Peptic Ulcers. *J. A. M. A.* **135**:1141 (December 25) 1947.
25. Walters, W., et al.: Gastric Neurectomy for Gastric and Duodenal Ulceration. *Ann. Surg.* **126**:1 (July) 1947.
26. Walters, W., et al.: Favorable and Unfavorable Results of Gastric Neurectomy (Vagotomy) for Peptic Ulcer: An Anatomic, Physiologic and Clinical Study. *Surg. Clin. N. America*, **885** (August) 1947.
27. Walters, W., et al.: Vagotomy in Peptic Ulcer. *Minnesota Med.* **30**:965-968 (September) 1947.
28. Wangenstein, Owen H.: Discussion of paper by Colp, Ralph.
29. Weeks, C.; Ryan, B. J., and Van Hov, J. M.: Two Deaths Associated with Supradiaphragmatic Vagotomy. *J. A. M. A.* **132**:988 (December 21) 1946.
30. Weinberg, Joseph, and Kraus, Alvin: Early Results from Vagus Nerve Section in the Treatment of Duodenal Ulcer. *West. J. Surg., Obst. & Gynec.* **56**:577-583 (November) 1948.

The author is indebted to Walter P. Martin, M.D., and Richard Johnson, M.D., Long Beach, Calif., for consultations in the preparation of these patients for vagotomy.

# A METHOD OF AVOIDING OPERATIVE STRICTURE FOLLOWING HEMORRHOIDECTOMY

R. HACKMEYER, M.D., *St. Louis*

It is NOT the intent of this paper to discuss the subject of hemorrhoidectomy comprehensively. There are many methods for removing hemorrhoids, all equally good when performed properly and well described in many textbooks and articles. A simple method to avoid stricture following operation for combined (internal and external) hemorrhoids is presented.

A properly performed hemorrhoidectomy will remove all internal hemorrhoidal tissue, excise

confidence to do a total and proper hemorrhoidectomy.

A brief review of some of the regional anatomy follows.

There are three palpable landmarks that should be identified at operation. It would be well to palpate these each time a digital rectal examination is done in order to familiarize oneself with this anatomy. They are important not only for hemorrhoidectomy but for the diagnosis and treatment of all anal conditions.

On palpation: (1) The external sphincter is easily palpable through the perianal skin as a firm band encircling the anal outlet. (2) In palpating the anal canal, one can detect a *sucrus* just cephalad to the palpable inner border of the external sphincter. This is the intermuscular septum or white line of Hilton, an important landmark. (3) Cephalad to the intermuscular septum is the palpable lower border of the internal sphincter.

On inspection of the anal canal: (1) One should familiarize himself with and identify the anorectal (dentate or pectinate) line (fig. 1). (2) A survey should be made to identify all internal hemorrhoids present in each case. In 1919, Miles<sup>1</sup> described the constant location of internal hemorrhoids, their position in the lower rectum and anus depending



Fig. 1. The three primary internal hemorrhoids and the pectinate line (A) are seen easily after retraction of the skin margins.

large segments of the adjacent external hemorrhoids and, no matter what the size or the number of hemorrhoids, result in no stricture. Concerning the avoidance of stricture the literature abounds in statements like "it requires experience to estimate what is an adequate amount of tissue to remove" or "preserve sufficient intervening mucous membrane between excised areas." There is no substitute for experience, and the preservation of mucous membrane bridges between excised areas is a "must" if one is to avoid removing too much tissue. However, such statements are too vague and are responsible sometimes for doing an inadequate hemorrhoidectomy or doing it adequately but fearfully. There is a more fundamental concept which includes all the wisdom of these vague statements yet states a principle simply and practically. It is this principle that I wish to discuss, claiming no originality in its use because every well executed hemorrhoidectomy utilizes the principle to a degree, consciously or unconsciously. Perhaps the statement of the idea is original. In any event, the concept has been useful in teaching surgical residents, quickly giving them the "know how" and

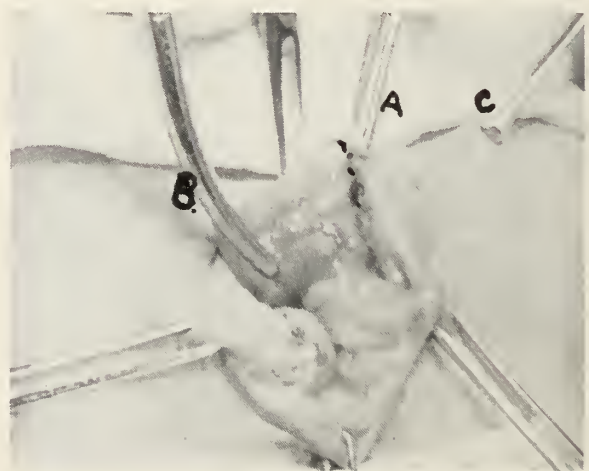


Fig. 2. The upper pole of the right posterior primary hemorrhoid has been grasped (B), as has the pecten zone (A) and the contiguous skin (C), radially outward.

on the constant distribution of the branches of the superior hemorrhoidal artery. In summary, in any one case, one to eight internal hemorrhoids can be present, i.e., three primary and five secondary. The primary hemorrhoids are distributed two on the right side and one on the left (fig. 1). Those on the right side are known as the right anterior and posterior primary hemorrhoids; on the left, as the left

Assistant, Department of Surgery, St. Louis University School of Medicine.



lateral primary. The right posterior and left lateral primary hemorrhoids may give off anterior and posterior secondary branches and the left anterior secondary rarely gives off an additional anterior secondary branch. Each internal hemorrhoid can be removed separately though, practically, it is usually possible to remove all in three-five bunches.

According to Gorsch,<sup>2</sup> a simple practical anatomic concept, which lends itself well to a workable clinical viewpoint of the common pathologic processes and their surgical management, describes the anal canal as extending from the anocutaneous line below to the dentate (anorectal) line above, divided by the intermuscular septum into an upper one third and a lower two thirds, the upper one third being the pecten. It is precisely this pecten, the upper zone (one third) of the anal canal which is concerned with the concept to be formulated. Its location has been defined. It is from 3 to 7 mm. or more in width. Its subepithelial areolar tissue is continuous with the submucosa of the rectal ampulla and is the site of anastomosis between the superior and inferior hemorrhoidal vessels and, therefore, the

resemble roughly an hour glass with the narrow or constricted area in the pecten zone (fig. 3).

Each hemorrhoid or mass removed thereafter

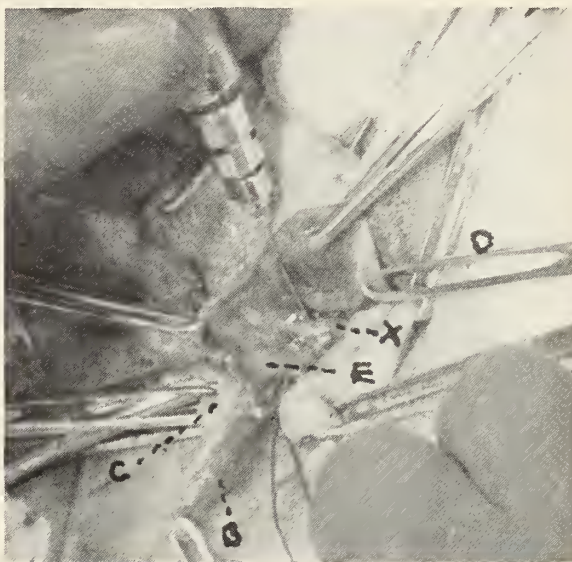


Fig. 4. Shows the exposure of the external sphincter (X). The skin wound edges have been retracted, the wedge of skin to be excised has been pulled aside (C) as has been the internal hemorrhoid (B) thereby exposing the combined longitudinal tendon (E).<sup>2</sup> A hypodermic needle attached to a syringe is used to indicate the outer border of the external sphincter.

follows the same pattern, removing a narrow segment of the pecten and each having separate lines of excision.

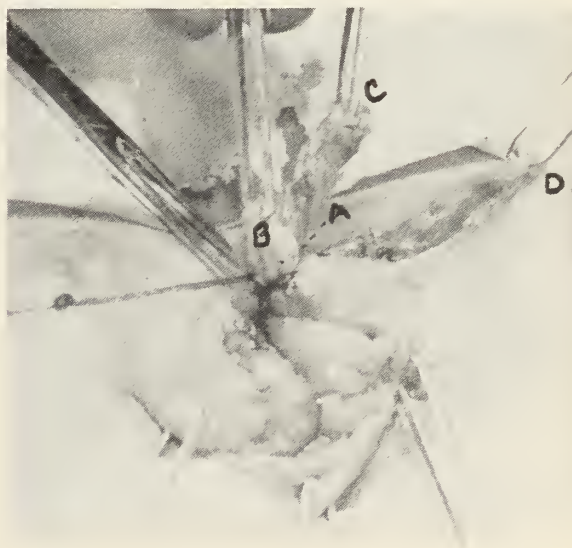


Fig. 5. A wedge of skin with the underlying segments of the external hemorrhoids has been freed to the white line of Hilton and raised (C). The internal hemorrhoid plus this wedge can be ligated en masse using the ligature previously placed in the upper pole of the internal hemorrhoid.

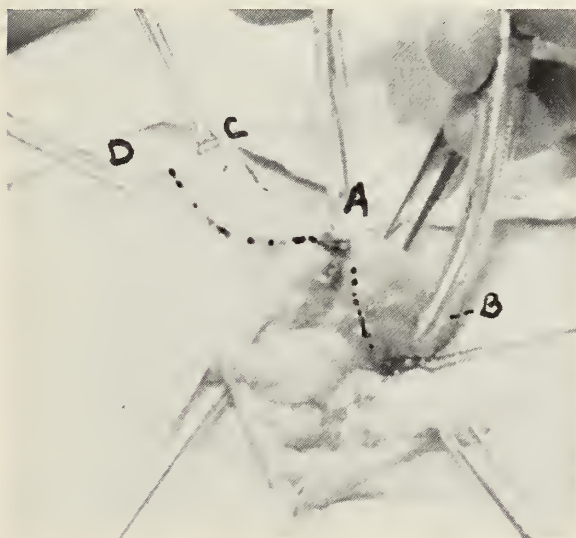


Fig. 3. (This photograph has been printed in reverse.) The dotted line indicates the line of incision on one side, resembling an hour glass with the constricted area in the pecten zone (A). The upper pole of the internal hemorrhoid has been ligated and an additional Allis clamp (D) has been applied for traction. By this incision a minimum of tissue is excised at the narrowest point of the anal canal.

site of anastomotic junction between internal and external hemorrhoids. The pecten is the narrowest part of the anal canal and the most common site of acquired stricture (fig. 2). It is essential, therefore, in doing a hemorrhoidectomy to remove the least amount of tissue in this zone. Above it, large redundant piles with their mucous membrane covering can be removed and, external to it, relatively large segments of skin with the underlying external hemorrhoids can be excised safely. Therefore, in removing a large internal hemorrhoidal mass with its contiguous segment of skin and the underlying external hemorrhoids, the line of excision should

Accordingly, at operation for combined hemorrhoids, the anal canal is dilated from two to three fingers. A survey is made identifying all internal hemorrhoids, searching in the usual sites. The order

of removal is decided on. The first internal hemorrhoid to be removed is grasped at the upper pole with a curved Peon forceps. Radially outward the skin is grasped with an Allis forceps at the apex of the wedge of skin to be removed. A second Allis clamp is applied to the pile in the pecten zone, just external to the pectinate line, picking up a small



Fig. 6. Same as figure 5 except, if preferred, a clamp can be applied to the internal hemorrhoid and the latter treated as described by Buie.<sup>4</sup>

bite of tissue. The incisions for removal of the skin wedge with the underlying external hemorrhoidal vein segments start from the immediate tip of the Allis clamp applied to the pecten, on each side, and extend outward fanwise around the Allis clamp applied to the skin (fig. 3). The skin with the underlying external hemorrhoids is dissected free from the underlying tissue up to the white line of Hilton, exposing the external sphincter to its inner lower border (fig. 4). The internal hemorrhoid is then removed by whatever method desired, sufficient of the mass being removed to excise all redundancy (figs. 5 and 6). Each pile is treated in a like manner. Figure 7 shows a common type of incision made in the skin in which the base of the triangle of skin to be excised rests on the pectinate line, thereby denuding a large part of the anal circumference at its narrowest point. Three or four such incisions may denude the greater part of the anal circumference in the pecten and be followed by a strictured anal canal. It is with this type of incision that the precept of leaving mucous membrane bridges between excised areas may help prevent a stricture, yet it would still be possible to re-

move too much tissue in this way. This injunction is a partial truth, a truth without understanding.

Following hemorrhoidectomy in which relatively large wedges of skin have been removed, it is necessary to keep the skin wounds from healing too rapidly. With the return of sphincter tone, widely separated wound edges are approximated so that the skin wounds appear like linear incisions. Healing can take place rather rapidly and may result in tightness at the anocutaneous junction.

#### CONCLUSION

A properly performed hemorrhoidectomy for combined hemorrhoids must remove all internal hemorrhoidal tissue and excise segments of the adjacent skin with the underlying external hemorrhoids. An incision is described which makes it possible to do so adequately without misgivings about removing too much tissue and with assurance that no stricture will follow.

539 N. Grand Blvd.

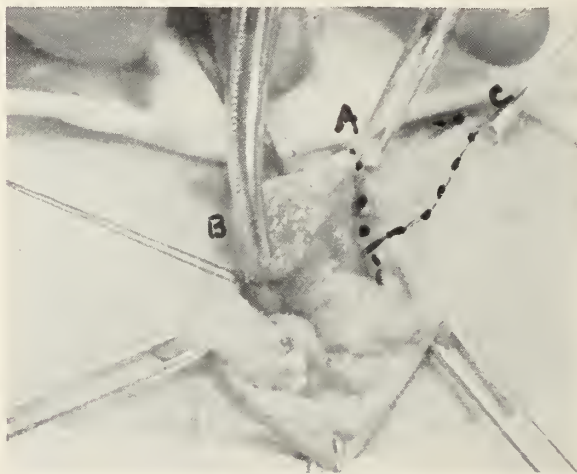


Fig. 7. A common type of skin incision in which a triangular wedge of skin is removed, the base of the triangle resting on the pectinate line. By this method too large segments of the pecten, the narrowest point of the anal canal, can be removed inadvertently. Compare with figure 3.

#### BIBLIOGRAPHY

1. Miles, W. Ernest: Observations upon Internal Piles, *Surg., Gynec. & Obstet.* **29**:497-506 (November) 1919.
2. Gorsch, R. V.: *Perineopelvic Anatomy*, New York, The Tilghman Company, 1941.
3. Milligen, E. T., and Morgan, C. N.: *Surgical Anatomy of the Anal Canal, with Special Reference to Ano-rectal Fistula*, *Lancet* **2**:1150-1216, 1934.
4. Buie, L. A.: *Proctoscopic Examination and the Treatment of Hemorrhoids and Anal Pruritis*, Philadelphia, W. B. Saunders Company, 1931.

All photographs were taken with patient in jack knife position.

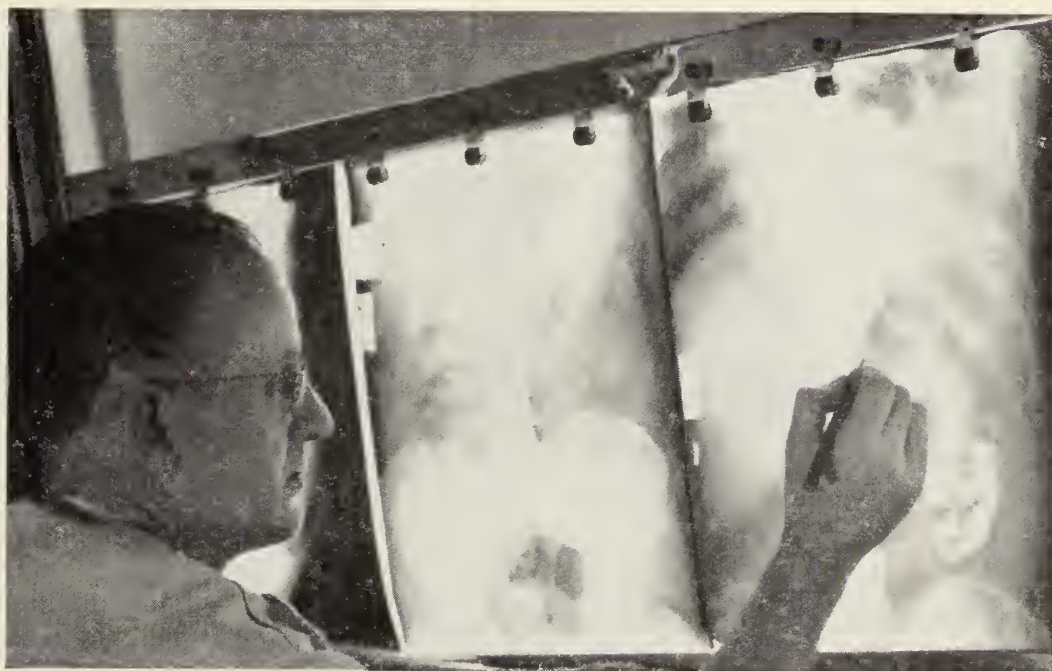


*Radiopaque diagnostic medium . . .*

*Original development of Searle research*

*now*  
**Iodochlorol**<sup>®</sup> *council  
accepted*

BRAND OF CHLORIODIZED OIL



*Clear visualization of body cavities*—for the roentgen investigation of pathologic disorders involving sinuses . . . bronchial tree . . . uterus . . . fallopian tubes . . . fistulas . . . soft tissue sinuses . . . genitourinary tract . . . empyemic cavities.

Iodochlorol is notably free from irritation, free-flowing, highly stable and has pronounced radiopaque qualities. It contains the two halogens, iodine, 27 per cent, and chlorine, 7.5 per cent, organically combined with a highly refined peanut oil.

Iodochlorol is available in bottles containing 20 cc. of the radiopaque medium; each one is packed in an individual carton. G. D. Searle & Co., Chicago 80, Illinois.

**Searle**

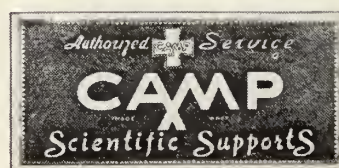
RESEARCH IN THE SERVICE OF MEDICINE

# CAMP

## for POSTOPERATIVE and POSTPARTUM NEEDS

Basic design and the unique system of adjustment make a large variety of Camp Scientific Supports especially useful as post-operative aids. Surgeons and physicians often prescribe them as assurance garments and consider them essential after operation upon obese persons, after repair of large herniae, or when wounds are draining or suppurating. A Camp Scientific Support is especially useful in the postoperative patient with undue relaxation of the abdominal wall. Obstetricians have long prescribed Camp Post-operative Supports for postpartum use. Physicians and surgeons may rely on the Camp-trained fitter for precise execution of all instructions.

If you do not have a copy of the Camp "Reference Book for Physicians and Surgeons", it will be sent on request.



THIS EMBLEM is displayed only by reliable merchants in your community. Camp Scientific Supports are never sold by door-to-door canvassers. Prices are based on intrinsic value. Regular technical and ethical training of Camp fitters insures precise and conscientious attention to your recommendations.

**S. H. CAMP AND COMPANY, JACKSON, MICHIGAN**

*World's Largest Manufacturers of Scientific Supports*

Offices in New York • Chicago • Windsor, Ontario • London, England



# HYPERTENSION

SURGICAL TREATMENT BY TRANSTHORACIC THORACOLUMBAR SYMPATHECTOMY

PAUL A. KNEPPER, M.D., *St. Joseph,*  
LOUIS G. NEUDORFF, M.D., *St. Joseph,*  
ROBERT M. BROOKER, M.D., *St. Joseph,*  
AND  
JOHN R. McDANIEL, M.D., *St. Joseph.*

ATTENTION HAS been given to the surgical treatment of hypertension since Pieri performed a resection of the left splanchnic nerve in 1930.<sup>1</sup> This type of treatment of hypertension introduced a new era of physiologic surgery. The rationale was that the vasoconstriction of the peripheral vessels would be relieved by resection of their sympathetic ganglia and nerves. Vasoconstriction of a large vascular bed should be relieved by thoracolumbar sympathectomy along with resection of all the splanchnic nerves. A thoracolumbar sympathectomy does not remove the pathologic process per se but does attempt to remove the physiologic vasoconstrictor mechanism.

In the development of this type of operation, Adson and Craig of the Mayo Clinic devised a ventral rhizotomy with section of the anterior roots from the sixth dorsal lumbar through the second lumbar.<sup>2</sup> Later they used the subdiaphragmatic section of the splanchnic nerves along with resection of the first and second lumbar ganglia.<sup>3</sup> The late Max Peet advocated the supradiaphragmatic resection of the tenth, eleventh and twelfth dorsal ganglia along with all three splanchnic nerves.<sup>4</sup> The combination of operations was accomplished by Smithwith.<sup>5</sup> Total thoracolumbar sympathectomy in stages was developed by Grimson.<sup>6</sup>

Four cases are presented in which the type of operation performed in transthoracic thoracolumbar sympathectomy from the sixth dorsal ganglion through the second lumbar, inclusive, together with resection of all three splanchnic nerves and the celiac ganglia.

## DETERMINATION OF OPERABILITY

The selection of patients for operation in this clinic is done by the medical service. The treatment of hypertension remains essentially medical. In the malignant type of hypertension in younger people, however, there is no satisfactory medical treatment and it is our opinion that these patients should be operated upon early without an attempt at prolonged medical therapy. Review of statistics shows that 20 per cent of people more than 50 years of age have hypertension. It is our opinion that hypertension per se is not an indication for surgical treatment. The patients who are potential candidates for a sympathectomy are given the following examinations and tests: A complete physical ex-

amination, including examination of the eye-grounds, complete blood count, serologic tests for syphilis, a chest x-ray, blood urea and urea nitrogen determinations, an electrocardiographic tracing, sedation test to determine the nervous factor described by Hines, and an intravenous pyelogram.

Indications for the operation are difficult to define. The duration of the disease is important; for

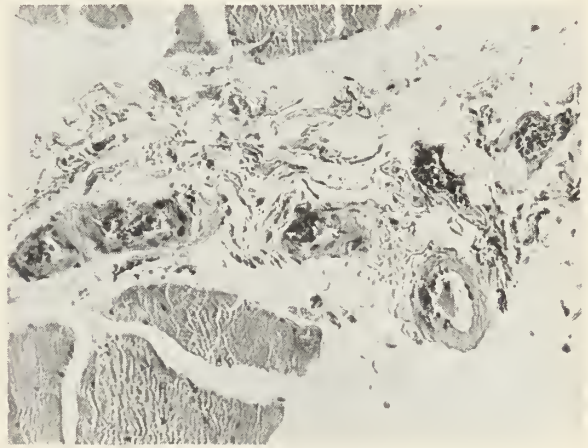


Fig. 1. Muscle biopsy. Shows the extensive involvement and thickening of the arterioles present in one patient in this series.

example, if the disease has been clinically present for ten years without progression, we do not consider such a patient to be operable. However, if the disease is of one to two years' duration with definite progression, the patient is a more suitable candidate. In the so-called hypertension group in which the disease is not arrested or controlled by adequate medical therapy and the patient has suffered definite cardiac, renal or cerebral damage from the disease, an operation may be indicated. A wide pulse pressure is a rather accurate gauge of the operability. There is no one single test which will evaluate a patient completely.

At the present time we are doing muscle biopsies at the time of surgery to correlate the permanent vascular changes with clinical results preliminary to using preoperative skeletal muscle biopsies for case selection.

A lowering of the blood pressure of from 40 to 60 points by sedation is considered valuable help in the selection of patients. We think the patient should have hourly blood pressure checks for a

From the Medical and Surgical Departments of the Thompson, Brumm & Knepper Clinic, St. Joseph. Read before the St. Joseph Clinical Society, April 28, 1949.

minimum of forty-eight hours under bed rest conditions.

Contraindications to the operation include the patient's age being more than 50, severe coronary disease, cardiac decompensation and renal failure or renal failure with elevated nitrogenous products. Permanent pathologic changes in the body from the disease are more frequent after 50 years of age, and

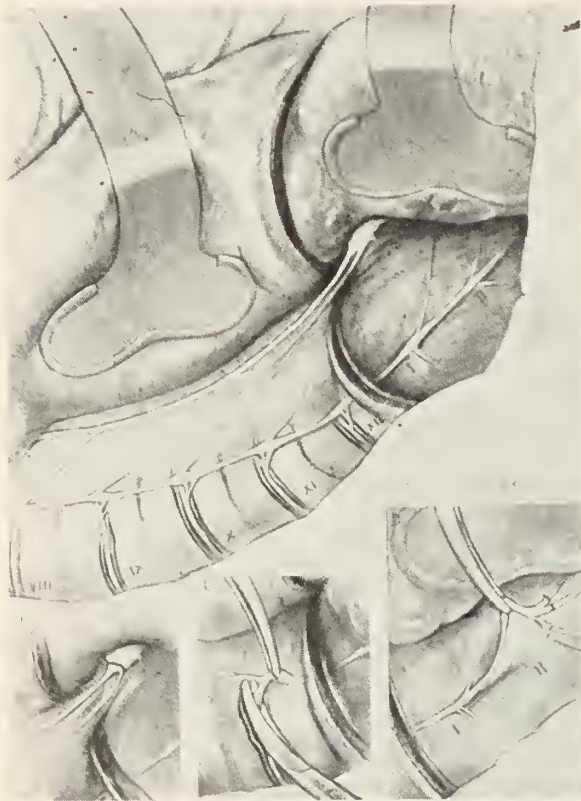


Fig. 2. Retraction of parietal pleura, lung and retroperitoneal fat with large Harrington splanchnic retractors. From Hinton and Lord, "Operative Technique of Thoracolumbar Sympathectomy."<sup>8</sup>

successful results from the operation are infrequent in this age group. The mortality and morbidity from the operation increases rapidly after the age of 50. Severe retinal arteriosclerosis is a contraindication. When the patient is in cardiac decompensation, the operation is not indicated. The overall condition of the patient is important. A patient who is an invalid from the disease is not a candidate for the operation.

#### TECHNIC OF OPERATION

The operation of transthoracic thoracolumbar sympathectomy and splanchnic resection is done in two stages from ten days to three weeks apart. We have elected to do the right side first routinely. Satisfactory anesthesia is imperative for a technically successful operation. The patient is placed in the kidney position and the ninth and tenth ribs resected from the angle anteriorly to the costochondral junction.

The pleura is incised over the trunk and the dorsal ganglia are removed as high as exposure will allow. This is usually at the level of the fifth or sixth dorsal ganglia. Occasionally the fourth dorsal ganglion can be removed. The diaphragm is then opened parallel to and about 2.5 cm. from the twelfth rib. The upper pole of the kidney can be seen and the kidney itself can be palpated. The adrenal gland is examined under direct vision. Following the operation, negative pressure is maintained by closed drainage of the pleural cavity for from forty-eight to seventy-two hours in order to evacuate all blood, air and small collections of fluid.

#### COMPLICATIONS

1. Pleural effusion or emphysema may follow any open thoracic procedure. Small collections of clear fluid are not considered important and are not aspirated if they produce no symptoms. There is definite danger of contamination and the production of frank empyema by aspiration.

2. Postoperative neuralgia (of varying degree) is common. In severe cases a type of back brace may be necessary for several months until the period of rehabilitation is completed. This period of rehabilitation is approximately three months. We have not found it necessary to put braces of any kind on the patients in this report.

3. Failure of reduction of blood pressure may result. In the small series of cases being reported there were no failures. This is attributed to a care-

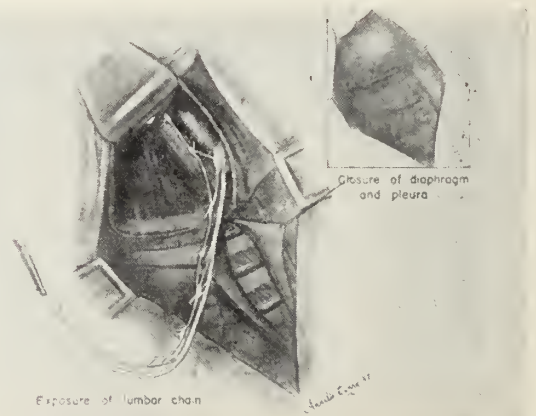


Fig. 3. The lumbar chain is exposed. Thereafter, the sympathetic chain and splanchnic nerves are excised and the diaphragm and pleura closed. This view is taken from the head of the table. From Linton, Moore, Simeone, Welch, and White.<sup>9</sup>

ful selection of patients. We believe that enough time has elapsed since the operations to give an accurate appraisal. This we consider to be three months and the cases presented have had postoperative studies of from three to nine months.

4. Postural hypotension can be listed as a complication or as a satisfactory result. Immediately postoperative, these patients have postural hypotension. Usually their tension is less than 100. If it goes low enough, they will faint and rapid changes from the standing, sitting or lying position





## *Adapted to a variety of uses*

Another product adapted to a variety of uses is short-acting Nembutal. Clinical reports now numbering more than 500 review over 44 conditions in which it is being effectively used. See list at right.

Adjusted doses of short-acting Nembutal can provide any degree of cerebral depression—from mild sedation to deep hypnosis. Dosage required is only about *one-half* that of many other barbiturates. Small dosage has several advantages: less drug to be inactivated, less possibility of "hangover," shorter duration of effect, greater safety and definite economy to the patient.

Short-acting Nembutal is available as Nembutal sodium, Nembutal calcium and Nembutal Elixir, all in easily administered small-dosage sizes. For the tab-indexed booklet, "44 Clinical Uses for Nembutal," write to ABBOTT LABORATORIES, NORTH CHICAGO, ILLINOIS.

In equal oral doses, no other barbiturate combines

QUICKER, BRIEFER,

MORE PROFOUND EFFECT than . . .

# *Nembutal*®

(Pentobarbital, Abbott)

# 44

## *of* NEMBUTAL'S CLINICAL USES

### SEDATIVE

#### Cardiovascular

Hypertension  
Coronary disease  
Angina  
Decompensation  
Peripheral vascular disease

#### Endocrine Disturbances

Hyperthyroid  
Menopause

#### Nausea and Vomiting

Functional or organic disease  
(acute gastrointestinal and emotional)  
X-ray sickness  
Pregnancy  
Motion sickness

#### Gastrointestinal Disorders

Cardiospasm  
Pylorospasm  
Spasm of biliary tract  
Spasm of colon  
Peptic ulcer  
Colitis  
Biliary dyskinesia

#### Allergic Disorders

Irritability  
To combat stimulation of  
ephedrine alone, etc.

#### Irritability Associated With Infections

#### Restlessness and Irritability With Pain

#### Central Nervous System

Paroxysm agitans  
Chorea  
Hysteria  
Delirium tremens  
Monia

#### Anticonvulsant

Traumatic  
Tetanus  
Strychnine  
Eclampsia  
Status epilepticus  
Anesthesia

#### OBSTETRICAL

Nausea and Vomiting  
Eclampsia  
Amnesia

#### HYPNOTIC

Induction of Sleep

#### SURGICAL

Preoperative Sedation  
Basal Anesthesia  
Postoperative Sedation

#### PEDIATRIC

Sedation for:  
Special examinations  
Blood transfusions  
Administration of parenteral fluids  
Reactions to immunization procedures  
Minor surgery

#### Preoperative Sedation

## A BIG TIME-SAVER FOR EVERY DOCTOR



This handy booklet for new mothers was "built to doctors' orders". It contains blank forms for filling in your instructions and formulas.

It provides a permanent case-history record. A memo will bring you a sample...or as many as you want for your daily practice...without obligation.

Many doctors are prescribing "Daricraft Homogenized Evaporated Milk". It is always uniform, safe, sterilized, easy to digest, and high in food value and minerals. Daricraft contains 400 U. S. P. units of Vitamin D per pint.



PRODUCERS CREAMERY CO., SPRINGFIELD, MO.

## Greetings of the Season

# C. E. Hovey

General Agent

Massachusetts Indemnity  
Insurance Company

Saint Louis

### Cook County Graduate School of Medicine Announces Continuous Courses

**SURGERY**—Intensive Course in Surgical Technique, Two Weeks, starting January 23, February 20. Surgical Technique, Surgical Anatomy & Clinical Surgery, Four Weeks, starting February 6, March 6. Surgery of Colon and Rectum, One Week, starting March 6. Esophageal Surgery, One Week, starting June 5. Breast & Thyroid Surgery, One Week, starting June 26. Thoracic Surgery, One Week, starting June 12. Gallbladder Surgery, Ten Hours, starting June 19. Fractures and Traumatic Surgery, Two Weeks, starting April 17.

**GYNECOLOGY**—Intensive Course, Two Weeks, starting February 20. Vaginal Approach to Pelvic Surgery, One Week, starting March 6.

**OBSTETRICS**—Intensive Course, Two Weeks, starting March 6.

**PEDIATRICS**—Intensive Course, Two Weeks, starting April 3.

**MEDICINE**—Intensive General Course, Two Weeks, starting April 24. Gastroscopy, Two Weeks, starting March 6.

**DERMATOLOGY**—Formal Course, Two Weeks, starting May 8. Informal Clinical Course every two weeks.

**ROENTGENOLOGY**—Diagnostic and Lecture Course First Monday of every month. Clinical Course Third Monday of every month. X-Ray Therapy every two weeks.

**UROLOGY**—Intensive Course, Two Weeks, starting April 17. Cystoscopy, Ten Day Practical Course, every two weeks.

**GENERAL, INTENSIVE AND SPECIAL COURSES IN ALL BRANCHES OF MEDICINE, SURGERY AND THE SPECIALTIES.**

**Teaching Faculty—Attending Staff, Cook County Hospital Registrar, 427 South Honore St., Chicago 12, Ill.**



will produce this physiologic effect. Some patients will require an abdominal support for an indefinite length of time.

5. There was no mortality in this series of four cases.

#### DISCUSSION

We do not consider evaluation of results of the operation in less than three months to be valid. Nerve cutting operations are accompanied by a "physiologic honeymoon" for approximately three months, and appraisals of the results before that time are subject to error. We consider the reduction of from 40 to 60 points in the systolic pressure and from 20 to 40 points in the diastolic pressure to be a satisfactory result. Decrease in the size of the heart by chest x-ray may be apparent. The electrocardiogram may show definite improvement following surgery. Improvement is noted frequently in urinary output.

#### CASE REPORTS

Case 1. Miss M. H., aged 45, factory worker, was first seen in the Clinic on May 19, 1948, with a history of hypertension for four years. She had been treated with many kinds of medicine without relief. Complaints on admission were high tension in the chest, shortness of breath, headaches and choking up when she was nervous. General physical examination showed the following positive findings: There was a moderate

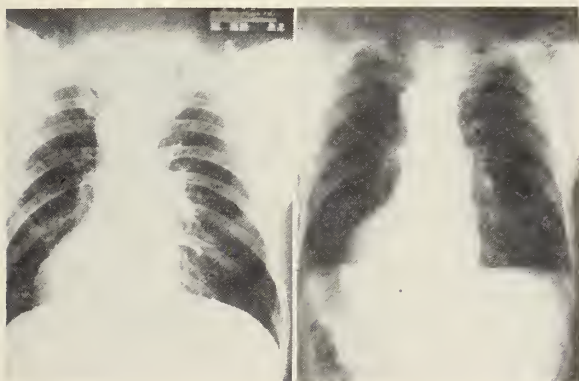


Fig. 4. A. Preoperative chest film. B. Postoperative chest film, showing the absence of the rib and the diaphragm in normal position without deformity.

sclerosis of the cerebral vessels. The blood pressure on admission was 204/130. Blood pressure readings over a twenty-four hour period, while hospitalized under heavy sedation, gave a mean blood pressure of 150/90. Laboratory findings follow: Urine was normal; hemoglobin 12.7 grams; erythrocytes 4,900,000; leukocytes 8,300; Kline test negative; blood urea was 9 mgs. Electrocardiogram revealed the rate to be 74, sinus rhythm, diphasic T in I and II, and isoelectric T in III. Chest x-ray showed a mild cardiac enlargement. The skull x-ray was normal. Intravenous pyelograms were normal. On June 5, 1948, a right thoracolumbar sympathectomy was done from the fifth dorsal, with all the splanchnic nerves, to the first and second lumbar ganglia. Uneventful convalescence following this operation. She was dismissed from the hospital after ten days and readmitted when the left side was done on July 1, 1948, from the sixth dorsal ganglion through

the second lumbar with all the splanchnic nerves. The kidneys and adrenals were normal on both sides. She was discharged from the hospital on July 7, 1948. On July 21 she was readmitted with a small empyema of the left chest for which a rib resection was necessary and she was discharged on July 27. A complete postoperative check was done on March 19, 1949, and the highest blood pressure was 148/90. Fundus-copic examination showed much improvement over the previous check. Heart and chest x-rays were

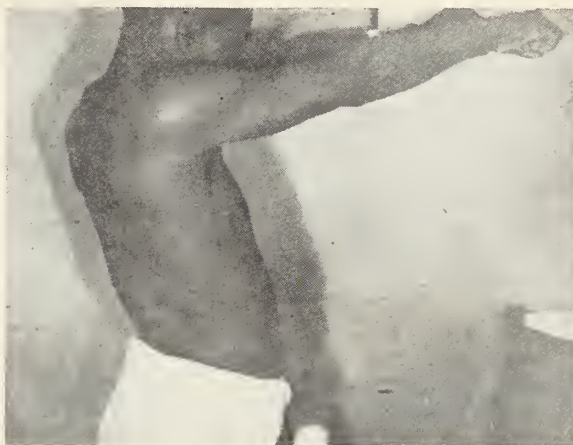


Fig. 5. Lateral view to show no deformity of the patient from the operation.

normal. Electrocardiogram showed the rate to be 68, with sinus rhythm, positive T in V-3 and 5, and positive T.

Case 2. Mrs A. S., aged 39, housewife, was first seen in the Clinic on December 1, 1947, because of headaches and hypertension. Blood pressure at that time was 170/112. She also complained of precordial pain radiating out into the arm with shortness of breath on exertion. Her blood pressure at other times was as high as 190/130. She was treated in the medical department with aminophylline tablets and several other types of medication. However, the patient continued to have the same complaints and her blood pressure stayed at 200/130. A chest x-ray of the heart showed it not exceeding normal limits in size. Intravenous urogram was normal and a skull x-ray was negative for pathologic conditions. Electrocardiogram revealed the rate to be 86 with sinus rhythm, a slurred QRS in III, left axis deviation, inverted T in III, with a diphasic T and isoelectric T in III. The blood urea was 11 mgs. Kline test was negative. Basal metabolic rate was plus 9. On bed rest with sodium amytal test, the mean pressure was 150/90. On June 29, 1948, a right transthoracic thoracolumbar sympathectomy, from the sixth dorsal ganglion, with all the splanchnic nerves, down to and including the first and second lumbar ganglion, was performed. She was discharged from the hospital on July 7, 1948. On July 27, a left transthoracic thoracolumbar sympathectomy, from the sixth dorsal through the second lumbar, along with all the splanchnic nerves, was done. The kidneys and adrenals were explored and found to be normal on both sides. Postoperative check on this patient on March 14, 1949, showed the highest blood pressure to be 156/108, with the patient being examined sitting, standing and lying.

Case 3. Mr. C. A. T., aged 50, laborer, was first seen

in the Clinic on July 29, 1947. His blood pressure was 180/120. Much medication had been given over a period of a year with the blood pressure staying the same. He had the complaints of headache and shortness of breath. The family history revealed that he had two brothers who died of high blood pressure. On July 31, 1948, the patient was reevaluated and found to have a mean blood pressure of 190/120. The fundi showed a grade II nicking, with cardiac hypertrophy. An electrocardiogram showed the rate to be 73, with sinus rhythm, slurred QRS in III, diphasic T in III. The blood urea was normal. The intravenous pyelo-

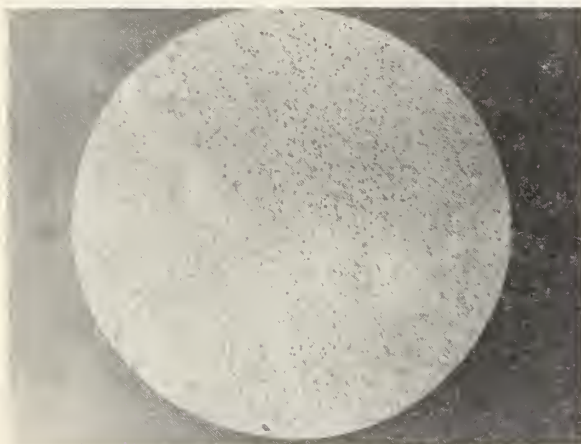


Fig. 6. Demonstrates the structure of the cortical adenoma removed in Case 4 from the adrenal gland through the diaphragm.

gram revealed no pathologic condition. General physical examination gave normal findings otherwise. On August 15, 1948, a right transthoracic thoracolumbar sympathectomy, from the sixth dorsal through the second lumbar, along with all the splanchnic nerves, was done. He was discharged on August 23 from the hospital. On September 2, 1948, a left transthoracic thoracolumbar sympathectomy, from the sixth dorsal through the second lumbar, with all of the splanchnic nerves, was done. On both sides the kidneys and adrenals were examined and found to be normal. He was discharged on September 11. The patient was back at hard labor after three month from the time of his operation. Reevaluation of the operation on March 18, 1949, showed the highest blood pressure to be 176/100, and the pulse was 60. Chest x-ray showed a cardiac enlargement of 10 per cent above normal. Electrocardiogram showed the rate to be 57, with sinus bradycardia, notched QRS in III, V-1, V-6; positive T. The blood urea was 11.

Case 4. Mrs. G. F., aged 41, department store executive, was admitted to the hospital on December 12, 1948, with the history that she had felt tired for one year. One month prior to admission she had a sudden onset of difficulty in talking and controlling the use of her right hand. The last blood pressure that she had had taken was several years before admission. On admission to the hospital her blood pressure was 300/180. Sedation test with sodium amytal gave a mean blood pressure of 195/100. Hourly blood pressures, not with sedation, showed a mean pressure of 260/180. The electrocardiogram showed a rate of 89, sinus rhythm, left axis devi-

ation and a bundle branch block. QRS was 0.12 second, 4-F positive T. There was a trace of albumin in the urine. Blood count was normal. Urea nitrogen was 80 mgs. Basal metabolism was plus 20. X-ray of the chest showed cardiac enlargement. On December 18, 1948, a right thoracolumbar sympathectomy was done transthoracically from the sixth dorsal through the second lumbar, with removal of the splanchnic nerves. The kidney and adrenal were normal on the right side. The patient made an uneventful convalescence. She was allowed up and around but because of her serious illness, it did not seem advisable to send her home. Therefore, on December 30, 1948, a left transthoracic thoracolumbar sympathectomy was done from the second dorsal through the second lumbar ganglion, with all the splanchnic nerves. On opening the diaphragm a tumor was found on the left adrenal approximately 2 cm. in size. The left kidney was normal. The tumor proved to be benign. Figure 6 shows the cortical origin of the tumor and that it is benign.

At the time of discharge from the hospital on January 8, 1949, the blood pressure was 160/120. Postoperative check done on April 5, 1949, revealed the blood urea to be 9. Blood pressure was 200/110. There was improvement in the eyegrounds. The size of the heart showed decrease by x-ray and an electrocardiogram revealed the rate to be 68, with sinus rhythm, left axis deviation, inverted T in I and II, V-1, absent R, left Q, positive T in V-3, absent R. The patient went back to work in a store three months from the time of her operation.

#### SUMMARY

Four cases have been presented who have had successful transthoracic thoracolumbar sympathectomies with removal of the splanchnic nerves. The one case (Case 4) also had a cortical adrenal tumor. We realize that a relatively short length of time has expired since the operation; however we feel it is sufficient to evaluate the results. All four of the patients returned to their former occupations within a period of three months from the time of the operation. One was a laborer, one a factory worker, one a housewife and the fourth an executive in a department store.

Thompson, Brumm & Knepper Clinic.

#### BIBLIOGRAPHY

1. Pierie, G.: La resezione dei nervi splanchnici, *Ann. ital. di chir.* 6:678-684 (July) 1927.
2. Adson, A. W., and Brown, G. E.: Malignant Hypertension, Report of a Case, Treated by bilateral Section of the Anterior Spinal Nerve Roots from the 6th Thoracic to 2nd Lumbar Inclusive, *J.A.M.A.* 102:1115-1118 (April 7) 1934.
3. Roundtree, L. G., and Adson, A. W.: Bilateral Lumbar Sympathectomy, Neurectomy in the Treatment of Malignant Hypertension, *J.A.M.A.* 85:959-961 (Sept. 26) 1925.
4. Peet, M. M., and Woods, Braden S.: Surgical Treatment for Hypertension; Results in 350 Consecutive Cases; Treated by Bilateral Supradiaphragmatic Splanchnicectomy and Lower Dorsal Sympathetic Ganglionectomy, *J.A.M.A.* 115:1875-1878 (Nov. 30) 1940.
5. Smithwick, R. H.: Technique for Splanchnic Resection in Hypertension, *Surgery*, 7:1-8 (January) 1940.
6. Grimson, K. S.: Total Thoracic and Partial to Lumbar Sympathectomy and Coeliac Ganglionectomy in the Treatment of Hypertension, *Ann. Surg.* 111:753-755 (October) 1941.
7. Peet, M. M.: Splanchnic Section for Hypertension: A Preliminary Report, *Univ. Hosp. Bull., Ann Arbor* 1:17-18, 1935.
8. Hinton, J. William, and Lord, Jere W.: Operative Technique of Thoracolumbar Sympathectomy, *Surg. Gynec. & Obst.* 83:643-646 (November) 1946.
9. Linton, R. R.; Moore, F. D.; Simeone, F. A.; Welch, C. E., and White, James C.: *Surg. Clin. N. America* (October) 1947.



*Plan Now to Attend the*  
**Sixth Annual Clinical Conference**  
**Chicago Medical Society**

**February 28, March 1, 2, and 3, 1950**

**Palmer House.**

**Chicago 3, Illinois**

A four-day meeting planned to keep you abreast of the latest developments in scientific medicine.

A group of outstanding men will present an excellent scientific program.

COLOR TELEVISION will be beamed from one of Chicago's large hospitals direct to the Palmer House.

Many instructive scientific and technical exhibits.

**MAKE YOUR RESERVATIONS DIRECT WITH THE PALMER HOUSE**

1850 • The One Hundredth Anniversary of the Chicago Medical Society • 1950

# MILWAUKEE SANITARIUM

WAUWATOSA, WISCONSIN

**FOR NERVOUS DISORDERS**

(Chicago Office— 1117 Marshall Field Annex  
Wednesday, 1-3 P. M.)  
Telephone—Central 6-1162

Maintaining the highest standards for more than a half century, the Milwaukee Sanitarium stands for all that is best in the care and treatment of nervous disorders. Photographs and particulars on request.

JOSEF A. KINDWALL, M.D.  
CARROLL W. OSGOOD, M.D.  
WILLIAM T. KRADWELL, M.D.  
BENJAMIN A. RUSKIN, M.D.  
LEWIS DANZIGER, M.D.  
RUSSELL C. MORRISON, M.D.  
JAMES L. BAKER, M.D.  
ROBERT A. RICHARDS, M.D.  
ARTHUR J. PATEK, M.D., Consultant  
G. H. SCHROEDER, Business Manager

COLONIAL HALL—One of the 14 Units in "Cottage Plan."



## SPECIAL ARTICLE

# INTERPRETING MEDICINE FOR THE LAYMAN

STEVEN M. SPENCER

THE PRIVATE practice of medicine is much more medicine and much less private than it was ten or fifteen years ago. The doctor, striving to familiarize himself with and to evaluate the parade of new drugs and technics, finds an eager public looking over his shoulder—and sometimes breathing down the back of his neck. Etiology, diagnosis and therapy no longer form a mystic trinity of knowledge to which only the medical profession has access and which the patient must accept on faith. The private language of the consultation room, with its quiet references to tachycardia, neoplasms and lues, can no longer be used with impunity in the presence of patients. They know too much. And they want to know a lot more. Gone are the days when a practitioner could keep the details of diagnosis to himself and dismiss Mrs. Brown with a reassuring word to the effect that “it’s nothing serious—and if it is come back on Friday and we’ll try something else.” Mrs. Brown will want to know the name of the germ that bit her. She will also ask if the prescription contains a sulfa, which upset her digestion last time she took it, or penicillin, which upset her budget.

However much you as physicians may occasionally be annoyed by the sound of a little medical knowledge rattling around in a patient’s skull, I think you will agree that the public as a whole has a legitimate interest in your problems and progress. I believe this interest can be a healthy situation not only for the patient but for the doctor and his profession as well. People who fully understand and appreciate what the great American medical profession has done and is continuing to do are less likely to accept a compulsory health insurance scheme or any other socialized medicine package wrapped in Washington and tied with yards of red tape.

Much of the public’s information about medicine is obtained through the press. If that information is sound the public reactions on medical matters are more apt to be sound than otherwise. And I am sure the press and the doctors can work together to bring about and maintain this desirable situation. I would not have you infer that the doctors and the reporters always see eye to eye on the details and that the task of presenting medical news to the public is therefore a simple one, performed by men and women whistling while they work and greeted, when finished, by the unanimous applause of editors, physicians and a hundred million readers. Such is not quite the case.

There is still room for discussion, and that, I take it, is one reason I am here.

We might stake out this area of discussion with such questions as these: (1) How much medical information does the layman want? (2) How much should he have? (3) How can medical reporting and medical public relations complement each other? (4) What part can the physician play in seeing that the public obtains sound medical information?

As a layman who spends a great deal of his time looking over medicine’s shoulder I wish to offer a few observations which may help us to answer these questions. The answers will not be final, but perhaps they will provide a working pattern of value to both of us.

I am sure that our objectives, at least, are in complete accord. Both the medical profession and the science writers want to improve the health of the American people—or of people all over the world, for that matter. But all of us know that medicine is not something people take instinctively, as they take food or water. It is a commodity on which they must first be sold. Selling is largely a matter of telling. That, I believe, is where you physicians and we writers and editors can work together. For it seems logical that the more people know about what doctors can do to help them, the more readily will they come to doctors for help, and the more readily will they rally to the doctor’s point of view in controversies over medical economics.

Although most people take medicine itself only when they or their physicians feel it is needed, information about medicine can be ingested, without discomfort, at almost any time. For the human machine has ever been a fascinating subject. So too have been the sundry disorders affecting it and the measures science is developing to correct them. These topics are of interest not only to the woman who likes to talk about her operation, but to anyone intelligent enough to appreciate the miracle of life, the “wisdom of the body,” to borrow Cannon’s beautiful phrase, and the power of science.

There is a tendency to regard medical news as a fairly recent feature of the lay press. It is true that the special writer on science subjects is a development of the past twenty years or so, but a popular interest in medicine has always existed, even though the doctors and editors may have underestimated it in the past. One of the first newspapers printed in Europe carried in 1494 an account of the outbreak of syphilis in Naples following the return of Columbus and his men from the New World.

Once a few writers began to interpret medical developments in simple terms and to combine the

Condensed from a report to the Omaha Mid-West Clinical Society.  
Science and Medical Editor, *The Saturday Evening Post*.



human interest and scientific aspects, the demand for this type of information greatly increased. Today the roster of the National Association of Science Writers lists 67 active and 39 associate members, and many of them devote a major part of their time to medical subjects. Every new development that comes over the medical horizon is greeted with a fresh spurt of printer's ink. The sulfa drugs were one of the big stories of the century. Penicillin, the discovery and application of which were filled with drama, made an even greater impact on the people's imagination.

The publication of medical articles in newspapers and magazines is not a matter of editorial whim. An editor retains his job partly on the basis of how well he can plan menus that appeal to his readers. He tries to give them what they want, within the limits of his own ideas of good taste and with an awareness of his responsibility to provide editorial leadership. Fortunately he can obtain helpful clues from such thermometers and windvanes as reader-ship surveys.

I can speak with detailed knowledge only of our own survey, but results of others are comparable. Every other week an organization carefully polls a selected sample of homes all over the United States to determine how the current issue of the *Saturday Evening Post* was received. Interviewer and interviewee sit down and thumb through the magazine, and the reader is asked which articles he or she read clear through. For purposes of analysis, the non-fiction is classified in six or seven categories—health and hygiene, peoples and places, war and peace, the United States government, applications of science (other than medicine), et cetera. The survey reveals that the medical articles, health and hygiene, consistently rank at or near the top in reader interest. In 1946 they led the whole list. In 1947 they were tied for third place, and all surveys to date this year show them once more in top position.

While this analysis applies to the content of one magazine, other periodicals have also found their medical features enjoy a high "Hooper rating." One reason is that the subject appeals to both sexes. Articles on football, politics, business and atomic energy will poll more men readers than women, and the reverse will be true of pieces on Hollywood, homemaking or children. But both men and women are keenly interested in new discoveries about heart disease, cancer, ulcer, deafness, backache.

There is another reason for the popularity of these features. Most medical news is good news. It has been said that the good and the peaceful make dull reading. But in this day when so much of the news is bad, good news is doubly welcome. And medicine, in my opinion, is not dull at any time. Even when an article does not announce a brand new treatment but simply presents a summary of the most up-to-date knowledge on the cause and treatment of any disease, or reports a promising development along the research front,

it gets a good reading. For the reassurance which comes from a fuller understanding of a condition affecting the reader or a member of his family is itself ample justification for publishing the information.

A case in point was the article, "I Have a Scar on My Heart," a personal experience story by a Detroit advertising man, W. A. P. John, which the *Post* printed last winter. It did not announce a sensational new therapy. It was just a well written account of how the writer had come through a coronary attack, how he had taken a philosophic view of the situation, how he had slowed down his pace, how, in brief, he was following his doctor's orders and getting along fine.

The response to this article was overwhelming. Mr. John received nearly 500 letters within a month after publication, virtually all of them commendatory and many expressing gratitude for some individual help or encouragement the reader had derived. Several wives thanked Mr. John for having dramatized the dangers of overdoing, and said their husbands had at last begun to heed the warning, even though up to that time they had completely disregarded the same advice from their own doctors. It is a fact well known among editors that readers do identify themselves with individuals about whom they read. That is the reason we like to use case histories in our articles, and it is the reason personal experience stories have been so effective in carrying the message of hope and encouragement to those waging their own personal battles against cancer, deafness and a variety of physical handicaps.

This, I maintain, is one kind of medical information that is helpful to the patient. If it makes the doctor's job any easier it may be considered helpful to him, too.

Education of the public in the value of early diagnosis of cancer has now reached the point where the demand for examinations exceeds the facilities for conducting them. Dr. Elise L'Esperance, Director of the Strang Cancer Prevention Clinic in New York, has stated that there is a waiting list of 6,000 in that area alone, and that a comparable situation exists in Philadelphia, Pittsburgh, Chicago and other cities where cancer detection centers are operated.

Now a layman who is interested in medical details often expects more information from his doctor than the latter may feel he has time to supply. Here again the press can perhaps be of help to both the physicians and the patients. One of the complaints we hear most frequently is that "The doctors don't tell us anything. They're in such a big hurry they don't bother to explain what it's all about." The doctor is a busy man. The demands on his time are exhausting. But as a result of not knowing the whole story the patient often carries an extra burden of anxiety.

For many readers magazine articles answer questions which have long bothered them about the general nature of their ailments. Specific details

about a patient's own case obviously can be supplied only by his doctor. But we believe that with your help and cooperation we can provide, through the medium of the press, a type of background information that in the long run will save you an endless amount of time and your patients an endless amount of worry.

It is admitted that in some situations, notably cancer cases known to be hopelessly incurable, the doctor may decide that silence or a little white lie is better than the grim, black truth. Even here I wonder if frankness is not often a better policy. The *Reader's Digest* recently carried a thoughtful little editorial on this point by a Cleveland newspaper editor, Carlton K. Matson, who had just discovered that he had cancer. He felt that "whispering campaigns" about cases of cancer—friendly and considerate as they may be intended—make the hard fact of cancer doubly hard." He spoke of a devoted husband and wife in his acquaintance who through the last six months of her agony "kept a desolate silence between them about her illness, secretly asking, each about the other: 'Does she know?' 'Does he know?'" And he called this "tragic nonsense." (Mr. Matson died a few months after he wrote the editorial.)

Aside from the cancer problem, which is a difficult one, is it not true that in the majority of instances the patient could be told about the physiology of his illness and the principles governing its treatment? Is not the patient who knows what it's all about and what his doctor is trying to do for him likely to be more cooperative?

The layman's lament has many verses, and they are doubtless as familiar to your ears as to mine. One or two seem so definitely a part of the broad problem of medical public relations that I should like to touch on them briefly at this point. One has to do with the high cost of diagnostic tests. People realize that X-rays, metabolism tests, blood studies, are necessary. But when the whole business has to be duplicated every time another doctor enters the case, the patient begins to wonder if somebody isn't being unnecessarily rough on his pocketbook.

And I don't believe the public has ever been entirely satisfied with the way the medical fee system operates. The principle of charging the patient on the basis of his ability to pay, or on the basis of what the doctor thinks is his ability to pay, does give rise to complaints about inequitable charges; and to that extent it plays into the hands of proponents of compulsory health insurance. I understand that the Colorado State Medical Society, after a public opinion study, disclosed dissatisfaction with certain aspects of the fee system, recommended the formulation of average fee schedules. The Society does not intend to regulate the maximum or minimum fee that any physician should charge, but believes that the public should know what a reasonable and average charge is for uncomplicated cases in each community. This is an action which seems to me to be in the interest of better medical public relations. If it proves success-

ful and is taken up by other state societies it should do much to answer a type of criticism all of us hear rather frequently.

After all, what really bothers many people is the financial uncertainty of illness. Families put off medical attention because they are afraid not of what the doctor will do to their bodies but of what he will do to their bank accounts. Charity won't take care of those who don't want to accept charity. And that, I am sure, includes millions of self-respecting wage earners and people of average salary. But if they could know ahead of time approximately what an operation or a course of treatments would cost, and if these estimates were based on a realistic appraisal of the family's situation in each case, they could juggle their finances around to meet the expense.

It is more and more to the advantage of the medical profession today to meet the public half way on these matters, for it is the public to which the doctors must look for an increasing share of support for medical education and research. As taxpayers providing government grants and as voluntary contributors to a growing list of special campaigns, the people want to be kept informed on medical affairs and they want to be assured that the doctors examine both sides of medical economics questions. If the American medical profession is to have an electorate favorably disposed toward the physicians' views on compulsory health insurance, for example, that electorate must be kept sold on the American medical profession.

I am no one-man Gallup poll, but I would guess that at the present moment the majority of the people is sold on American medicine. And reports of the difficulties being experienced in putting the British health insurance scheme into operation aren't likely to unsell the Americans on their own system very fast. Furthermore, the stanzas of the layman's lament are frequently interspersed with songs of praise from men and women who want us to write stories about their own favorite doctors, who are always "the most wonderful doctors in the world." I am reminded of the mother of a boy who for years had been invalided with a severe and resistant sinus infection. The illness had run the family heavily into debt. The mother was overjoyed when she finally was put in touch with physicians who were able to clear up the condition, and at little or no cost to the family. Her son was "reborn," she wrote, and could now run and play with the other youngsters. Of the doctors, she said: "The world should hear more about such men as these, who give freely of their time and themselves, without thought of remuneration . . . men who have brought a miracle into our lives and into the lives of countless others."

Even though such letters may sound a bit sentimental and overenthusiastic to the physician, I cannot help but feel that they must be considered a sincere plea for us to tell again and again the good news of medicine. And I am sure that your professional public relations will benefit if the story





much  
to  
recommend  
it

**SOLGANAL\***  
(aurothioglucose)



Schering's aurothioglucose has much to recommend it for the treatment of active rheumatoid arthritis. Water soluble, but suspended in oil to provide prolonged absorption, it is effective in small dosage, frequently inducing remissions in early acute phases of the disorder.

### **in active rheumatoid arthritis**

Marked improvement has been reported in "50 to 60 per cent of patients, moderate improvement in 20 to 25 per cent. . . ."<sup>1</sup> Among 1000 patients treated recently with SOLGANAL, there were no fatalities and few instances of severe toxicity.<sup>1</sup>

1. Rawls, W. B.: New York Med. (no. 15) 3:19, 1947.

\*®

*Schering*

CORPORATION • BLOOMFIELD, N. J.

SOLGANAL



of American medicine is kept constantly before the public. Nor can it be told in vague generalities. It must deal rather with vagotomies, with the new drugs against infection, with the heroic surgical measures against cancer, with better ways to treat polio, with more howl-proof methods of immunizing babies.

Moreover, the story of American medicine is living, contemporary history. As such it must concern itself with living men and women. Medical contributions are not made by disembodied spirits, at least not in civilized societies. They are made by individuals and teams of individuals—research workers in their laboratories, surgeons in their operating rooms, general practitioners and specialists in their offices and at the bedside. And the light of the whole group will shine but dimly, so far as the public eye is concerned, if the light of each member of the group is hidden under his own private bushel of anonymity. The history of medicine would be dull reading indeed if it contained no mention of the names and personalities of men like Harvey, Jenner, Beaumont, Pasteur, Osler, Cannon, Cushing, Fleming.

Yet as reporters of current medical history we often stub our toes against the doctor's tradition, that bushel hiding his light and labeled "Don't quote me!" To be sure, in the twenty years I have been writing about medical activities I have seen the profession's attitude toward reporters change from definite coolness to warm and friendly cooperation. But the doctor's reticence at seeing his name in the public print still places obstacles in our path. It is part of the reason many physicians wish to censor every article written about their work or that of their junior associates. To assure scientific accuracy a magazine editor may ask a doctor to review a medical article before publication. But it strikes the editor as curious that frequently the medical critic, instead of questioning statements of fact, will assume the English teacher's role and make changes lying strictly within the field of editorial judgment, including the deleting of his name here and there.

Our argument for using names is simply that we believe the public has a right to know whose work is being described and whose opinions are reflected in the text of the article. To adopt a policy of not quoting authorities would open the way for unreliable reports on medicine by irresponsible publications—and there are a few. In addition, we feel the story of medicine's advance is the story of people as well as of facts.

At this point it may interest you to hear something about how science writers perform their operation. The technic varies somewhat with the publication and the individual, but every conscientious writer goes to considerable length to obtain all the facts, negative as well as favorable. In reporting a new development or a newsworthy situation or issue he does not confine himself to one man's word but may talk with fifteen or twenty in an effort to arrive at a balanced appraisal. This may take him

to Boston, New York, Philadelphia, Detroit, Omaha, Rochester and Minneapolis for material on one article alone. In addition to interviewing doctors and attending medical meetings, the writer may review two or three dozen articles in the technical literature and thumb through several books. The whole task, from the first scribbled note to the finished and accepted manuscript, may consume five or six weeks or more, and after that may come minor revisions and the reading and correcting of the final proof. Medical articles handled by our own publication represent an editorial expenditure in time and money averaging about 20 per cent more than the average for articles in all other categories.

Because it is recognized that illustrations attract the reader and help tell the story, a great deal of energy is also directed toward obtaining good photographs. And the photographer is often tangled to the point of frustration in the coils of medical protocol. He may make a long trip to take a doctor's picture, only to find the doctor has changed his mind for one reason or another. If at long last he is allowed to set up his camera and lights, the physician may permit only the back of his head to be photographed, or he will request that his name be left out of the captions. It's a case, to paraphrase Mr. Whittier, of "Shoot if you must this old gray head, but please omit my name," he said."

Now the reasons for this behavior are not hard to find, even though the science writers do not always consider them valid. The difficulty arises, as we have said, out of a tradition of medical modesty, a feeling that it is unethical for a doctor's name or face to appear in newspapers or popular magazines. The tradition apparently is based on the theory that if it were declared ethical to blow one's own horn, the quacks would blow loudest, attract most of the business and ruin the public's health. The theory is all right, but the fact of the matter is that the quacks disregard all rules against horn-blowing and do pretty well for themselves. I hold no brief for self-advertising, but I think it should be clearly differentiated from bona fide medical news. For if it is agreed that accurate articles on medical progress are useful, then writers should be able to obtain information from doctors without fear of subjecting the latter to censure by their colleagues.

As science writers and editors we feel there is no reason why we and the doctors cannot cooperate in an atmosphere of mutual respect and confidence. We have been and can continue to be good friends and allies of the medical profession. Speaking now for the *Post*, I can say that it has supported the doctors on every major problem they have faced in the last ten years. It opposed socialized medicine and it is still against it. It has carried articles exposing anti-vivisection as a dangerous racket—as have other magazines—even at the risk of serious publication losses. We are for the American medical profession.

Recognizing the importance of full cooperation between physicians and the press, the National



# DOCTOR

*You are invited to attend*

## The Mid-South Post Graduate Medical Assembly

(61st annual session)

*to be held at*

**The Peabody Hotel**

**Memphis, Tennessee**

**February 14, 15, 16 and 17, 1950**

### Participating speakers will be:

Walter C. Alvarez—Medicine Rochester, Minnesota	Henry J. John—Medicine Cleveland, Ohio
Robert L. Bennett—Pediatrics Warm Springs, Georgia	B. R. Kirklin—Roentgenology Rochester, Minnesota
J. Dewey Bisgard—Surgery Omaha, Nebraska	John A. Kolmer—Medicine Philadelphia—Pennsylvania
T. G. Blocker, Jr.—Surgery Galveston, Texas	Dean M. Lierle—Otolaryngology Iowa City, Iowa
Hans Brunner—Otolaryngology Newark, New Jersey	William F. Mengert—Obstetrics & Gynecology Dallas, Texas
C. Charles Burlingame—Psychiatry Hartford, Connecticut	Louis E. Moon—Proctology Omaha, Nebraska
F. Bayard Carter—Gynecology Durham, North Carolina	Lewis M. Overton—Orthopedics Albuquerque, New Mexico
George W. Crile, Jr.—Surgery Cleveland, Ohio	Ralph A. Reis—Obstetrics & Gynecology Chicago, Illinois
John H. Dunnington—Ophthalmology New York City	Charles T. Stone—Medicine Galveston, Texas
Paul Freud—Pediatrics New York City	Philip Thorek—Surgery Chicago, Illinois
Edgar Gordon—Medicine Madison, Wisconsin	Theodore Woodward—Medicine Baltimore, Maryland
Charles C. Higgins—Urology Cleveland, Ohio	

Guest Entertainer: Mr. Berry B. Brooks  
Nationally known big game hunter

**Programs will be mailed about January 10th.**

**Make your reservations with  
Dr. Henry B. Gotten  
Secretary-Treasurer  
899 Madison  
Memphis, Tennessee**

Association of Science Writers recently discussed plans for threshing out with representatives of the medical profession a workable policy on medical news which would satisfy both sides. In the meantime we have noted with interest that a Code of Cooperation already has been adopted by the Colorado State Medical Society and the press and radio of that state.

The Code sets up a system of official spokesmen for each county society—usually the president, secretary and publicity chairman. These men and women, as well as spokesmen for the hospitals, are to make themselves available to the press and may be quoted "in matters of public interest for purposes of authenticating information." The Code states specifically that this action by the spokesmen "shall not be considered by their colleagues as a breach of the time-honored practice of physicians to avoid personal publicity, since it is done in the best interests of the public and the profession."

That single sentence cuts to the very core of the problem and in my opinion it is worth all the ef-

fort put into framing the document and carrying out its provisions. Colorado's program is a tremendously encouraging sign that the physicians and the press are alive to the importance of giving accurate medical information to the public. I hope the Code will work out and that plans of this type, perhaps broadened in some respects, will be adopted in other states.

For the story of medicine is one which the press and the public are eager to hear. If occasions can be provided for doctors and reporters to come together to discuss medical developments, I am sure both groups will find them worthwhile. Your town wants to know what kind of medicine it has, what facilities and services are available, what types of operation its surgeons are performing, what research projects are under way. The public wants to know what you are doing and saying. Your story and every doctor's story is part of the fabric of its life. It is the story of big and little miracles, of birth and growth and struggle and triumph. It is the story of man himself, and that, God and the atom willing, is still the biggest and best story on earth.

---

#### PSYCHIATRISTS TELL HOW TO RELIEVE WORRY

Two psychiatrists of the University of California Medical School have been studying worry, "taking the emotion apart," to see what happens when people become anxious and how anxiety can be relieved.

Reporting in the November 1 issue of *Archives of Neurology and Psychiatry*, published by the American Medical Association, Drs. Jurgen Ruesch and A. Rodney Prestwood, of San Francisco, give their conclusions.

When a person's body is stimulated to prepare for action, an unusual condition of blood vessels, muscles and other parts occurs, the doctors say. As the body is persistently stimulated to prepare for action which cannot be made, the resulting effects are felt by the person as anxiety and tension.

Anxiety is contagious, the doctors found. No matter how much the worries try to suppress and conceal their emotion, other people become infected from small indications, such as tone of voice and gestures, and start worrying, too.

Some people try to compensate for anxiety by over-indulgence in eating, smoking or drinking, the study shows. Others try to suppress their worry by making an effort to conceal it. Others try to establish a feeling of "belonging" by social contacts, ranging from con-

versation about the weather to group activities such as those of clubs.

Still others react by attempting to control the actions of friends and acquaintances, to dictate to them.

None of these are mature or effective reactions, the psychiatrists found.

Successful management of anxiety generated in daily life seems possible only through discussing and sharing the problem or situation with other persons, the psychiatrists say.

"The successful management of anxiety generated in daily life seems possible only through the process of sharing and communication," the article points out.

"The process of communication is essential for healthy functioning so that people may combine efforts to cooperate, complement and increase their ability to cope with surroundings.

"Alleviation of anxiety through personal contact is the process which is basic to all interpersonal relations from babyhood to old age.

"The ability to communicate and hence to share anxiety seems to constitute that process responsible for feelings of personal security of the individual."

The study was supported by a grant from the U. S. Public Health Service, Division of Mental Hygiene.

---

#### A. M. A. OFFERS HEALTH EDUCATION SERVICE TO SCHOOLS

The American Medical Association's Bureau of Health Education is cooperating with school health education programs on a national scale by issuing a monthly sheet of classroom discussion questions.

The sheet is to be used in connection with *Hygeia*, the health magazine of the A. M. A. Questions are limited to subjects of a scientific nature and are based on authoritative information contained in articles appearing in the magazine.

The questions cover a wide range of health topics, with emphasis on practical information which students can use for daily living, and are aimed at helping solve mental and emotional as well as physical health problems.

School officials and teachers interested in obtaining the service may write to *Hygeia*, 535 N. Dearborn St., Chicago 10, Ill.





**FULFILLING EVERY  
REQUIREMENT OF EFFECTIVENESS  
AND PATIENT-ACCEPTANCE**

*Ramses*  
TRADEMARK REG. U.S. PAT. OFF.  
**VAGINAL JELLY\***

- 1** Immobilizes sperm in the fastest time recognized under the Brown and Gamble technique
- 2** Occludes the cervix for as long as 10 hours—**effective barrier action**
- 3** Nonirritating and nontoxic—**safe for continued use**
- 4** Crystal clear, nonstaining, delicately fragrant—**esthetically agreeable**
- 5** Will not liquefy at body temperature—**not excessively lubricating**



**FOR ECONOMY TO YOUR PATIENTS  
SPECIFY THE LARGE FIVE-OUNCE SIZE**



*gynecological division*  
**JULIUS SCHMID, INC.**  
423 West 55th St., New York 19, N. Y.  
*quality first since 1883*

\*Active Ingredients: Dodecaethyleneglycol  
Monolaurate 5%; Boric Acid 1%; Alcohol 5%.

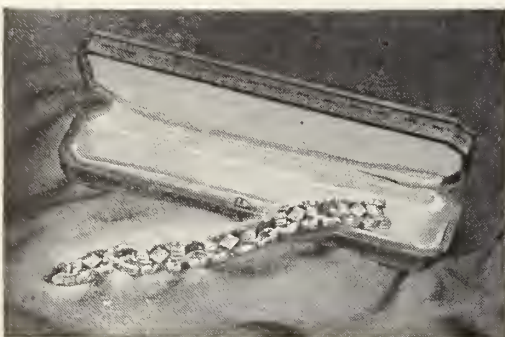
# What other Christmas present can you name that...



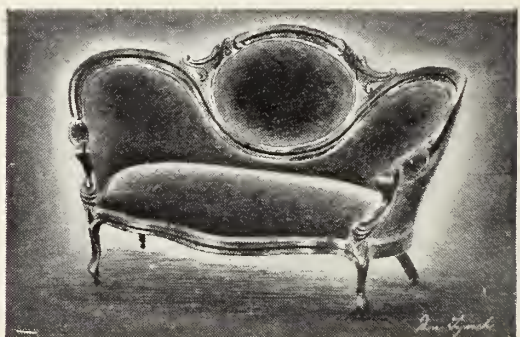
... you wouldn't want to exchange



... comes in so handy on rainy days



... never wears out



... keeps increasing in value

... is so quick and easy to buy  
... pleases everyone on your list  
**AND** ... gives itself all over again  
(with interest) ten years later?



**U.S.**  
**Savings Bonds**

Automatic Saving is Sure Saving



Contributed by this magazine in co-operation with the Magazine Publishers of America as a public service.



# Graduate and Postgraduate Medicine

## COURSE IN THE SCIENCES FUNDAMENTAL TO MEDICAL AND SURGICAL SPECIALTIES AT UNIVERSITY OF COLORADO MEDICAL SCHOOL

Denver, Colorado

Winter Quarter—January 3 to March 18, 1950

Spring Quarter—March 27 to June 10, 1950

These courses are designed to orient the graduate student in the basic sciences required for certification by the various American Specialty Boards, except Otolaryngology and Ophthalmology. Attendance on a full-time or part-time basis may be arranged according to individual needs.

Winter Quarter includes symposia and seminars covering the various clinical phases of physiology, biochemistry, pharmacology, pathology and bacteriology closely correlated with patient problems as related to the clinical specialties. (Emphasis is placed upon medical subjects.)

Spring Quarter includes anatomy of the surgical specialties, experimental surgery, gross and microscopic pathology, neuropathology, neuroanatomy and radiophysics. (Emphasis is placed on surgical subjects.)

University credit is granted. Tuition is \$110.00 per quarter.

**Apply to Director of Graduate and Postgraduate Medical Education, University of Colorado Medical Center, Denver 7, Colorado.**



One of Four Main Buildings

## GLENWOOD SANATORIUM

A Private Hospital for Care of Nervous and Mental Disorders, Alcohol and Narcotic Addictions.

Thoroughly equipped for all the approved therapeutic measures. Insulin, metrazol and electro shock used in selected cases.

Four main buildings for patients permit ample classification facilities. Large grounds composed of about fifty acres make many out-of-door activities possible.

Phone WEBster 1056

*For full information, address*

GLENWOOD SANATORIUM, Webster Groves, St. Louis 19, Mo.

## PRESIDENT'S PAGE

Barton County is located in the Southwest section of Missouri. The pretty little town of Lamar is the county seat. On October 20 a meeting of the Eighth Councilor District was held in Lamar and approximately seventy members of the District attended this meeting.



The primary purpose of the meeting was to show the visiting physicians the new Barton County Memorial Hospital. The hospital will be able to care for thirty patients. It has the latest and best equipment available for the care of the sick. It was financed entirely by county bond issues and by gifts of interested citizens with the exception of a \$10,000 grant from the State of Missouri. Linens used in the hospital and something more than 2,000 quarts of home canned fruits and vegetables were donated by the women of the community.

I am sure that all who saw the hospital were impressed with it. Here is an example of what can be done at the local level. Evidently every person in the county had some part to play in the plans for this fine institution. As a result it is difficult to single out individuals who are deserving of special praise. However, Dr. Vern T. Bickle of Lamar and the special committee appointed by the Lamar Chamber of Commerce worked tirelessly for the success of the project and deserve the thanks of all the people of the community.

I hope all will have an opportunity to see this fine memorial hospital which was built to honor the men and women of Barton County, living and dead, who served in World War II.

*Wallis Smith.*



# THE JOURNAL

of the

Missouri State Medical Association

623 Missouri Bldg. Telephone: Newstead 0404-05

Subscription . . . . \$3.00 a year in advance

*Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent.*

DECEMBER, 1949

## EDITORIALS

### CENTENNIAL SESSION

The scientific program for the Centennial Session of the Association is nearing completion. The schedule of the Session will follow, to some extent, that of previous years. The House of Delegates will convene for its first session on Sunday afternoon, March 26, and will meet in recessed session on Monday, March 27, at 4:00 p. m., and hold its final meeting on Wednesday afternoon, March 29.

Color television will open the scientific sessions both afternoon and morning of each day with surgical subjects presented in the mornings and medical subjects in the afternoons. Following television at each session guest speakers will present formal presentations on subjects chosen for their practical application to every day practice.

The Annual Banquet in honor of Past Presidents will be held on Monday evening at which time, in addition to a guest speaker, the incoming President will be installed, the Past President's key will be presented to the retiring President and the award for the winning essay in the Woman's Auxiliary Essay Contest will be given.

The Missouri Society of Medical Technologists will sponsor a meeting in conjunction with the Association's meeting which will be open to all technicians in the state and physicians are urged to arrange that their assistants may plan to attend this meeting. The program of this meeting which is being planned as a practical course will appear in later issues of THE JOURNAL.

Hotel Jefferson will be the headquarters of the session and members are urged to make reservations early. A reservation blank appears in this issue for convenience in making reservations.

### REPORTING MEDICINE FOR THE PUBLIC

In the battle which lies ahead to defeat schemes for compulsory health insurance by the Federal government, American Medicine will need friends, more than ever before, who can carry its message to the public. Among these friends are the medical

and science reporters of the newspapers, the magazines and the radio and television. There are many of them who are sympathetic to the economic and political warnings of medicine in America today because they have, through the years, reported faithfully, and predominantly with high accuracy, the many scientific advances in discovery in the medical sciences. They know, and they tell millions, of the new drugs, technics and forms of treatment which have made American medicine the best in the world.

It is significant that the A. M. A. Code of Ethics for physicians has been relaxed in various ways to permit doctors to discuss the problem of compulsory health insurance without, at the same time, risking censor by their colleagues. This easing of former rigidity should now enable the reputable science and medical editors to perform better their important function of informing modern society with greater clarity and with greater benefit to both the public and the medical profession. It is essential that this be done for if the lay public can learn, by specific and concrete examples, of medical scientific progress in America the public in turn will give far greater support to the logical arguments against compulsory health insurance which the spokesmen of medicine may make in public forums and the legislative halls of the land.

Indeed, in the transmission of intelligence to the public about the progress and affairs of medicine there can be no one way street which is easy to travel when reporters are talking about the political and economic aspects of medicine but is an almost impassable highway when reporters seek to discuss the research or clinical side of medicine.

Doctors all too seldom appreciate the problems of medical writers in preparing accurate articles on medical progress for layman consumption. It is a pleasure, therefore, for *New York Medicine* to present the views of Mr. Steven M. Spencer who is science and medical editor of the *Saturday Evening Post*.

Mr. Spencer is the immediate past-president of the National Association of Science Writers, which corresponds to the A. M. A. of medical and scientific reporting. Mr. Spencer was the first Neiman Fellow at Harvard to devote his postgraduate year of study to the basic sciences so that he might better report upon scientific and medical discovery. He has received the George Westinghouse Medal and the accompanying \$1,000 award of the American Association for the Advancement of Science for his distinguished service in magazine writing.

Mr. Spencer's article, on page 862, should be read in the light of the revised principles of medical ethics which have been adopted by the A. M. A. and which were published in the *Journal of the American Medical Association* on June 25, 1949. While each state and county medical society determines its own specific rules of conduct it may be expected that the new rulings of the A. M. A. will influence these organizations.

The pertinent change in the Code of Ethics comes in Chapter I, Section 5, which now reads:

"Many people, literate and well educated, do not possess a special knowledge of medicine. Medical books and journals are not easily accessible or readily understandable.

"The medical profession considers it ethical for a physician to meet the request of a component or constituent medical society to write, act or speak for general readers or audiences. The adaptability of medical material for presentation to the public may be perceived first by publishers, motion picture producers or radio officials. These may offer to the physician opportunity to release to the public some article, exhibit or drawing. Refusal to release the material may be considered a refusal to perform a public service, yet compliance may bring a charge of self-seeking or solicitation. In such circumstances the physician should be guided by the decision of official agencies established through component and constituent medical organizations.

"A physician who desires to know whether, ethically, he may engage in a project aimed at health education of the public should request the approval of the designated officer or committee of his county medical society."

A thoughtful reading of Mr. Spencer's remarks and a comparison with the above ruling will be valuable for all physicians in New York just as they were when recently presented before the Omaha Mid-West Clinical Society.

## NEWS NOTES

Florence E. MacInnis, M.D., Kansas City, was elected vice president of the Mississippi Valley Trudeau Society at a meeting September 22 to 24.

E. E. Glenn, M.D., Springfield, and Florence E. MacInnis, M.D., Kansas City, were elected to the governing council of the Mississippi Valley Conference on Tuberculosis at a meeting in St. Louis in September.

Frederick A. Jostes, M.D., St. Louis, was the recipient of a testimonial award "in recognition of devoted and distinguished service to the Cripple Children of Missouri" from the Missouri Society for Cripple Children and Adults on October 21.

Missouri physicians who became Fellows of the American College of Surgeons at the 1949 convocation are Drs. William Barry, Ernest K. Robinson, Richard A. Twyman and Franklin H. Wakefield, Kansas City; Russell J. Crider, St. Charles; Morris Davidson, Emmett B. Drescher, Carl J. Gissy, William L. Smiley, Gene B. Starkloff and Arthur N. Vaughn, St. Louis; Ben G. Mannis, Jefferson Barracks; John R. McDaniel, Wilbur P. McDonald and Henry C. Willumsen, St. Joseph; Dayton R. Seabaugh, Cape Girardeau; Horace E. Thomas, Columbia.

Andy Hall, M.D., St. Louis, was a guest of the Franklin County (Illinois) Medical Society at West Frankford, Illinois, on October 19, and spoke on "Urologic Problems of General Practitioners."

J. R. McVay, M.D., Kansas City, addressed the junior class of the University of Kansas School of Medicine on October 8 on "The 12 Point Program of the American Medical Association."

Lloyd Stockwell, M.D., Kansas City, presented a paper on "Analysis of Causes of Recurring Dysuria Following Prostatic Surgery" at the South Central Section of the American Urological Association in Colorado Springs, Colorado, October 16 to 19.

Duff S. Allen, M.D., St. Louis, spoke on "Socialized Medicine" at a meeting of the St. Louis Electrical Board of Trade in St. Louis on October 11.

Jean Willoughby, M.D., Kansas City, addressed a meeting of the Kansas City Property Owners Association in Kansas City on November 1 on "Compulsory Sickness Insurance."

The second Midwest Cancer Conference sponsored by the American Cancer Society, Inc., will be held at the Broadview Hotel, Wichita, Kansas, January 19, 20 and 21. Physicians from Kansas, Missouri, Arkansas, Oklahoma and Colorado will be invited to the conference.

## MUSINGS OF THE FIELD SECRETARY

One hundred and sixty-five physicians, educators and public health officials from thirty-five states and three territories attended the Second National Conference on Physicians and Schools at Highland Park, Illinois, October 13 to 15. This Conference, sponsored by the Bureau of Health Education of the American Medical Association, considered the major school health problems facing most schools.

Some of the points brought forth were as follows:

1. The medical profession should accord the school physician the respect which his important function in the community deserves.
2. As a key figure in the promotion of better school health the family physician should be brought into school health programs in the planning stage.
3. Physical examinations should be the province of the family physician whenever possible.
4. Medical schools should give additional training on school health to their students.
5. There should be more and better education of teachers in preventive health services, particularly in the area of mental health.
6. Medical societies should be included in the initial planning of any health service program for children, regardless of how the plan is initiated.
7. Greater attention needs to be given to the mental and emotional health needs of children and



to such problems as nutrition and accident prevention.

8. The need for more trained personnel, more facilities and additional funds to carry out well-developed school health programs, particularly in rural areas, found no dissenters.

9. There is need in the medical curriculums for a course stressing the social aspects of medicine.

10. The all important close relationship between the family physician, parent and school is lacking in far too many places.

11. A committee or council on the state level, composed of representatives of the State Department of Education, State Health Department and State Medical Association would seem to offer a most effective way to plan and administer better school health services for the entire state.

## DEATHS

**Duff, Talbot S., M.D.**, Cainsville, a graduate of the Kansas City Medical College, 1899; member of the Mercer County Medical Society; aged 71; died August 16.

**Nichols, Charles B., M.D.**, Auxvasse, a graduate of the Barnes Medical College, 1906; member of the Callaway County Medical Society; Affiliate Fellow of the American Medical Association; aged 80; died October 3.

**Black, W. Byron, M.D.**, Kansas City, a graduate of the University of Kansas Medical School, 1922; member of the Jackson County Medical Society; Fellow of the American Medical Association; diplomat of the American Board of Otolaryngology; aged 57; died October 23.

**Cordry, Harold C., M.D.**, Kansas City, a graduate of St. Louis University School of Medicine, 1903; member of the Jackson County Medical Society; aged 70; died October 23.

## ORGANIZATION ACTIVITIES

### COMMITTEE ON HEALTH AND PUBLIC INSTRUCTION

Peter T. Bohan, M.D., Kansas City, was guest speaker at a lay health forum meeting in Springfield on October 27. Dr. Bohan spoke to approximately 200 persons at Clara Thompson Hall on the Drury College campus on the subject "Heart Disease." This forum, furnished by the Committee on Health and Public Instruction, was sponsored by the Greene County Medical Society as a part of its program of health education. A dinner in honor of Dr. Bohan was held at the Kentwood Arms Hotel preceding the forum.

## SOCIETY PROCEEDINGS

### FIRST COUNCILOR DISTRICT

DONALD M. DOWELL, CHILLICOTHE, COUNCILOR  
Clay County Clinical Conference

The Second Annual Clay County Medical Society Clinical Conference was held at the Elms Hotel, Excelsior Springs, on November 13. The conference opened at noon with a luncheon and round table discussion on "Anesthesiology" followed by a talk by Milton C. Peterson, M.D., Kansas City, on "Uses of Intravenous

Advertisement



From where I sit  
by Joe Marsh

## Clam Chowder Can Be Dynamite!

*If Smiley Roberts is a friend of yours, like he is mine, and if you want to keep his friendship, like I do, don't let him hear you say that good clam chowder can be made without cream.*

In New England, where Smiley comes from, friendships have been broken over tomatoes versus cream in clam chowder. Experts say that south of Boston the tomato reigns supreme, but north of Boston it's cream—or else!

*From where I sit, whether it should have cream or tomatoes is simply a matter of taste. This is plain to anyone who doesn't come from clam chowder country.*

What a great world this would be if we could all see that most prejudices are matters of taste only. Some like hot coffee. Some like it iced. Some people like a temperate glass of beer. Others prefer ice-cold lemonade. My grandmother used to say, "Prejudice that sees only what it pleases, cannot see very plain."

*Joe Marsh*

Procaine" and one by Louis Porter, M.D., Kansas City, on "Short Anesthetics for Office Use."

The afternoon program beginning at 2:00 p. m., consisted of the following presentations:

"Urology in General Practice," by William Valk, M.D., Kansas City, Kansas.

"Rheumatic Fever, Its Recognition and Care," by Arthur E. Strauss, M.D., St. Louis.

"Backache in Women," by Oren Moore, M.D., Charlotte, North Carolina.

"Treatment of Cancer of the Head and Neck with Irradiation," by Charles L. Martin, M.D., Dallas, Texas.

The evening session began with a fine dinner followed by a number of introductions and the scientific program presenting Oren Moore, M.D., Charlotte, North Carolina, on "The Management of Abnormal Presentation of Labor," and Arthur E. Strauss, M.D., St. Louis, on "Hypertension."

Some 100 physicians were in attendance at the Conference and the Clay County Society says, "Thanks for your presence."

S. R. McCracken, M.D., Secretary.

#### Grundy-Daviess Counties Medical Society

Thirty-six physicians attended a joint dinner meeting of the Caldwell-Livingston, Clinton, Grundy-Daviess, Carroll, Harrison, Linn, Mercer and Ray County Medical Societies at the Strand Hotel, Chillicothe, Thursday evening, October 27.

Following a most satisfying steak dinner, the program for the evening was presented.

W. A. Bloom, M.D., Fayette, President-elect, Missouri State Medical Association, discussed briefly the plans for the 1950 Centennial Meeting of the Association and praised the group for the splendid meetings being held in Chillicothe from time to time.

William J. Shaw, M.D., Fayette, President, Missouri Academy of General Practice, gave a short discussion of the purposes and functions of the Academy.

Graham Asher, M.D., Kansas City, presented the scientific talk of the evening on "The Management of Congestive Heart Failure." Dr. Asher was not permitted to get off so easy as just a formal presentation of his subject. His listeners showed no hesitancy in asking plenty of questions which called for much additional discussion.

The host for this meeting was the Grundy-Daviess County Medical Society. It was suggested by Donald Dowell, M.D., Councilor of the District, and adopted by the group, that meetings of this type should be held every six weeks in the future with the Carroll County Society accepting the invitation to sponsor the next meeting.

E. A. DUFFY, M.D., Secretary.

#### FOURTH COUNCILOR DISTRICT

OTTO W. KOCH, CLAYTON, COUNCILOR

St. Louis County Medical Society

The St. Louis County Medical Society held its regular meeting on October 26 at 8:35 p. m. in the Health Center, St. Louis County Hospital.

Dr. E. R. Brown reported for the special committee appointed to select a proper gift for the St. Louis County Hospital, and upon motion it was decided to purchase a Bell and Howell projector.

Dr. Howe introduced two applicants for membership, Dr. Richard Cohle and Dr. Thomas Rusan.

O. P. Hampton, Jr., M.D., St. Louis, spoke on "Internal Derangements of the Knee," presenting a review of the anatomy of the knee joint, types and methods of diagnosis of internal derangements and detailed management of knee injuries. The paper was discussed by Drs. E. R. Brown, Walther, Stuebner, Irick and N. S. Vitale. On motion the speaker was given a rising vote of thanks.

ROBERT C. KINGSLAND, M.D., Secretary.



Barton County Memorial Hospital



### SIXTH COUNCILOR DISTRICT

R. W. KENNEDY, MARSHALL, COUNCILOR

The Bates County Medical Society was host at an evening dinner meeting of the Sixth Councilor District at Butler, on October 26. Preceding the dinner, the thirty-two physicians present enjoyed a pleasant social hour together.

The program of the evening began with a few pertinent remarks by R. W. Kennedy, M.D., Councilor of the District. R. B. Wray, M.D., then discussed briefly the Missouri Academy of General Practice. The scientific talk of the evening was given by M. Pinson Neal, M.D., of Columbia, who spoke on "Diagnoses Commonly Missed in General Practice." A lively discussion period followed Dr. Neal's most interesting presentation. Ray McIntyre, Field Secretary of the State Association made a number of announcements and gave a short résumé of the program for the 1950 Centennial Meeting in St. Louis, March 26 to 29. Preceding adjournment, Dan Robinson, M.D., Slater, on behalf of the Saline County Medical Society, extended an invitation to the District to hold its next meeting in Marshall in January 1950.

JOHN M. COOPER, M.D., Secretary.

### EIGHTH COUNCILOR DISTRICT

W. S. SEWELL, SPRINGFIELD, COUNCILOR

Sixty-five physicians braved inclement weather on Thursday night, October 20, to attend a dinner meeting of the Eighth Councilor District of the State Medical Association at Lamar, and to look over the new Barton County Memorial Hospital.

Preceding a delightful social hour at the home of Vern Bickel, M.D., a large number of physicians en-

joyed an inspection tour through the Memorial Hospital.

Following a fine dinner served at 7:30 p. m., Wallis Smith, M.D., President of the Association, gave a short address and set the stage for the scientific program, "The Many Manifestations of 'So-Called' Colitis," by Robert C. Davis, M.D., Kansas City, and "Pubo-Sacral Hernia," by Carl S. Bickel, M.D., Wheeling, West Virginia.

The entire program was unusually well received and the entire district owes a vote of thanks to the Barton-Dade County Society, the host, for the well-planned local arrangements.

VERN T. BICKEL, M.D., Secretary.

### TENTH COUNCILOR DISTRICT

FRANK W. HALL, CAPE GIRARDEAU, COUNCILOR

St. Francois-Iron-Madison-Washington-Reynolds  
County Medical Society

The St. Francois-Iron-Madison-Washington-Reynolds County Medical Society held its regular monthly meeting at 8:00 p. m. on October 27 at State Hospital No. 4, Farmington.

Alfred J. Cone, M.D., St. Louis, spoke on "Diseases of the Esophagus."

The following members were present: Drs. G. L. Watkins, Sr., G. L. Watkins, Jr., S. A. Lanzafame, E. F. Hoctor, Farmington; H. M. Roebber, M. T. Haw, Jr., Van W. Taylor, Bonne Terre; H. H. Cline, Piedmont; J. L. Foster, Desloge; M. Grossman, W. H. Barron, S. C. Slaughter, Fredericktown; B. H. Taylor, C. H. Appleberry and P. L. Jones, Flat River.

MARVIN T. HAW, JR., M.D., Secretary.



## North Shore Health Resort

Winnetka, Illinois

*on the Shores of  
Lake Michigan*

A completely equipped sanitarium for the care of  
*nervous and mental disorders, alcoholism and drug addiction*  
offering all forms of treatment, including electric shock.

**SAMUEL LIEBMAN, M.S., M.D.**

225 Sheridan Road

Medical Director

Phone Winnetka 211

## CORRESPONDENCE

THE NATIONAL FOUNDATION FOR INFANTILE  
PARALYSIS, INC.120 Broadway  
New York 5, N. Y.

November 4, 1949.

*To the Editor:*

There have been many inquiries recently regarding the arrangements for covering the cost of care for poliomyelitis patients. There are a number of factors which will be of interest to your readers.

During 1949 a poliomyelitis incidence of unprecedented size (more than 37,000 stricken since January 1) has put serious financial strain upon the National Foundation for Infantile Paralysis. For the first time in its eleven year history it was necessary to conduct a Polio Epidemic Emergency Drive which although very helpful did not entirely meet current needs.

In its avowed purpose to lead, direct and unify the national fight against infantile paralysis the National Foundation undertook support of research and education, for in these areas lie the ultimate hope for eradication of poliomyelitis. These programs are not to be compromised in any way.

The greatest cost to the National Foundation, however, is payment for medical care to patients. It is urgent for all physicians to assist in the institution of measures which will reduce costs without prejudice to patients. The chief costs are for hospitalization. Many poliomyelitis patients are hospitalized when they can be cared for at home at a reduced cost.

Our experience in this year's epidemic which has spared virtually no part of the country suggests the following:

1. Abortive, nonparalytic and mildly paralytic poliomyelitis patients are being hospitalized in the mistaken idea that the stated period of isolation must be spent in the hospital.

2. Overly prolonged hospitalization is frequent. This is particularly true of the paralytic patient who has achieved maximum improvement from daily physical therapy. Home care with periodic office or clinic visits is then in order.

3. There still exists in some places a general attitude that poliomyelitis is a bizarre disease which only a few physicians can manage. This is not so. It is disturbing, for example, to find physicians leaning so heavily upon the guidance of physical therapists and nurses. The physician's assessment of the total patient is the best index in determining when a patient shall leave hospital to receive home, office or clinic care.

4. Patients hospitalized on general ward services are not charged medical fees ordinarily. When patients are hospitalized on isolation wards for poliomyelitis, however, bills for medical fees are at times submitted. Payment is frequently made by the local chapters of the National Foundation whose treasuries are now generally depleted.

It is hoped that your readers will understand clearly how urgent is our need for cooperation from all practicing physicians in the matters mentioned above.

Sincerely yours,

HART E. VAN RIPER, M.D.,  
Medical Director.

## INDEX TO VOLUME 46

## A

Aiken, George A., et al—Symposium on Trauma	701
Allergy Problems—Rinkel	91
Amebiasis, The Laboratory Diagnosis of—MacDonald	477
Amendment to the Constitution—Organization Activities	122, 227
American Medical Association Assessment—Editorial	435
—Miscellany	440
Interim Session—Editorial	43
—Miscellany	798
Provides \$25,000 to Set Up Chronic Illness Commission—Miscellany	298
Session Open to All Members—Editorial	359
Analgesic in Surgery, The Role of a New—Costello and McDonald	333
Andrews, Bernell W., and Goldman, Max—Foreign Body in the Bladder	338
Annual Session—Editorial	43, 115, 195, 873
Minutes—Organization Activities	496
Registration—Organization Activities	543
Anticoagulants in the Treatment of Diseases of the Heart and Blood Vessels with Special Reference to Long Term Anticoagulant Therapy, The Use of—Foley	643
Army Needs Medical Officers in Japan—Miscellany	798
Asthma, Clinical Experiences With the Diagnosis of—Eyer mann	767
Atlantic City Meeting—Editorial	490
Atwell, Floyd C., and Singleton, J. Milton—Diseases of the Newborn	770
Aureomycin, Primary Atypical Pneumonia Treated with—Bernreiter and Holthaus	420
Average Age of Physicians Declines—Editorial	115

## B

Bagby, James W., and Hagemann, Paul O.—Dermatitis Due to Bal (2, 3—dithiopropanol)	775
Bal (2, 3—dithiopropanol), Dermatitis Due to—Hagemann and Bagby	775
Barker, Paul S.—Electrocardiographic Changes in Coronary Artery Disease	646
Beare, J. Byron, and Wattenberg, Carl A.—Transurethral Prostatectomy	482
Bernreiter, Michael—Pitresen Test	102
and Holthaus, Joseph M.—Primary Atypical Pneumonia Treated with Aureomycin	420
Births in Hospitals—Miscellany	660
Blackman, Nathan—The Need of Belonging in War and Peace: Its Effect on Delinquency	417
Bloom, W. A., M.D., President-Elect—Editorial	359
et al—Symposium on Trauma	708
Book Reviews—	
A-B-C's of Sulfonamide and Antibiotic Therapy—Long	306
Abramson, Harold A.—Psychodynamics and the Allergic Patient	804
Adler, Francis H.—Gifford's Textbook of Ophthalmology	146
Alexander, Edythe Louise—Operating Room Technique	548
Alsever, John B., DeGowin, Elmer L., and Hardin, Robert C.—Blood Transfusion	372
Alvarez, Walter C.—An Introduction to Gastro-Enterology	230
Anderson, W. A. D.—Pathology	374
—Synopsis of Pathology	450
An Introduction to Gastro-Enterology—Alvarez	230
Atlas of Roentgenographic Positions—Merrill	808
Bastedo, Walter Arthur—Pharmacology Therapeutics and Prescription Writing	58
Beck, Alfred C.—Obstetrical Practice	146
Beckman, Harry—Treatment in General Practice	304
Bibby, Cyril—How Life Is Handed On	146
Blood Transfusion—DeGowin, Hardin and Alsever	372
Bluemel, C. S.—War, Politics and Insanity	374
Bohler, Lorenz—Medullary Nailing of Kuntschner	667
Boyd, William—A Textbook of Pathology	146
Brams, William A.—Treatment of Heart Disease	54
Brief Psychotherapy—Frohman	668
Business Side of Medical Practice, The—Wiprud	804
Cancer Committee of the Iowa State Medical Society—Standards for the Diagnosis and Treatment of Cancer	547
Care of the Surgical Patient—Fine	806
Carter, Charles F.—Microbiology and Pathology	304
Chusid, Joseph G., McDonald, Joseph J., and Lange, Jack—Correlative Neuroanatomy	304
Clevenger, Emma L.—Principles Governing Eye Operation Room Procedures	547
Clinical Aspects and Treatment of Surgical Infections—Meleney	372
Case-Taking—Hermann	548
Diagnosis of Laboratory Methods—Todd and Sanford	667
Laboratory Methods and Diagnosis—Gradwohl	56
Toxicology—Thienes and Haley	610
Colwell, Arthur R.—Diabetes Mellitus in General Practice	304
Communal Sick Care in the German Ghetto—Marcus	306
Communicable Diseases—Top	668
Concise Anatomy—Edwards	58
Conn, Howard F.—Current Therapy 1949, Latest Approved Methods of Treatment for the Practicing Physician	670



# HOTEL RESERVATIONS

*for the 100th anniversary*

## ANNUAL SESSION

Jefferson Hotel, St. Louis

March 26, 27, 28, 29, 1950

Hotel reservations for the Annual Session should be made direct to the hotel of choice. Early reservations will insure obtaining the reservation desired. The application following may be used in place of a letter to the hotel, if reservation is desired at the Jefferson Hotel.

Room For Two			
Single	Double Bed	Twin Beds	Suites—2 Rooms
\$4.50	\$6.00	\$7.50	\$15.00
5.00	6.50	8.00	22.00
6.00	7.50	8.50	
6.50	8.00		

### Hotel:

Please reserve the following accommodations for the Annual Session of the Missouri State Medical Association, March 26-29, 1950.

Single Room ..... Double Room ..... Twin Bedded Room .....  
 2 Room Suite .....  
 Rate: From \$..... to \$.....  
 Arriving at Hotel (date) ..... (hour) ..... a. m. .... p. m.  
 Leaving (date) ..... (hour) ..... a. m. .... p. m.

Names and addresses of all persons for whom you are requesting reservations and who will occupy the rooms asked for:

.....  
 .....  
 .....

### Individual Requesting Reservations:

Name .....  
 Address .....  
 City and State .....

- Correlative Neuroanatomy—McDonald, Chusid and Lange ..... 304
- Crossen, Harry Sturgeon, and Crossen, Robert James—Operative Gynecology ..... 668
- Robert James, and Crossen, Harry Sturgeon—Operative Gynecology ..... 668
- Current Therapy 1949, Latest Approved Methods of Treatment for the Practicing Physician—Conn ..... 670
- DeGowin, Elmer L., Hardin, Robert C., and Alsever, John B.—Blood Transfusion ..... 372
- Detailed Atlas of the Head and Neck—Truex and Kellner ..... 668
- Diabetes Mellitus in General Practice—Colwell ..... 304
- Diseases Affecting the Vulva—Hunt ..... 56
- Doctor Talks to Teen-Agers, A—Sadler ..... 803
- Doctors of Infamy—Mitscherlich ..... 670
- Drake, Daniel—Pioneer Life in Kentucky ..... 302
- Dry, Thomas J., and Willis, Fredrick A.—Heart and Circulation, A History of the ..... 58
- Dunbar, Flanders—Synopsis of Psychosomatic Diagnosis and Treatment ..... 307
- Edwards, Linden F.—Concise Anatomy ..... 58
- Egel, Paula F.—Technique of Treatment for the Cerebral Palsy Child ..... 306
- Elman, Robert—Parenteral Alimentation in Surgery ..... 667
- Encyclopedia of Medical Sources—Kelly ..... 230
- English, O. Spurgeon, and Weiss, Edward—Psychosomatic Medicine ..... 884
- Fine, Jacob—Care of the Surgical Patient ..... 806
- Fishbein, Morris—Medical Writing, The Technic and the Art ..... 548
- Foot and Ankle, The—Lewin ..... 668
- Four Hundred Years of a Doctor's Life—Rosen ..... 610
- Frohman, Bertrand S.—Brief Psychotherapy ..... 668
- General Endocrinology—Turner ..... 54
- Geriatric Medicine—Stieglitz ..... 808
- Goar, Everett L.—Handbook of Ophthalmology ..... 610
- Gradwohl, R. B. H.—Clinical Laboratory Methods and Diagnosis ..... 56
- Haley, Thomas J., and Thienes, Clinton H.—Clinical Toxicology ..... 610
- Handbook of Diseases of the Skin—Sutton ..... 804
- of Ophthalmology—Goar ..... 610
- of Orthopaedic Surgery—Shands ..... 306
- Hardin, Robert C., DeGowin, Elmer L., and Alsever, John B.—Blood Transfusion ..... 372
- Heart and Circulation, A History of the—Willis and Dry ..... 58
- A Physiologic and Clinical Study of Cardio-Vascular Diseases—Luisada ..... 54
- Hernia, Anatomy, Etiology, Symptoms, Diagnosis, Differential Diagnosis, Prognosis and Treatment—Watson ..... 548
- Herrmann, George R.—Clinical Case-Taking ..... 548
- Hill, Lee Forrest, and Shultz, Gladys Denny—Your Baby, The Complete Baby Book for Mothers and Fathers ..... 307
- Histopathologic Technic—Lillie ..... 302
- How Life Is Handed On—Bibby ..... 146
- Human Biochemistry—Kleiner ..... 804
- Hunt, Elizabeth—Diseases Affecting the Vulva ..... 56
- Ilgelfritz, Hugh C.—Preoperative and Postoperative Care of Surgical Patients ..... 56
- Infant Nutrition, A Textbook of Infant Feeding for Students and Practitioners of Medicine—Jeans and Marriott ..... 664
- Jeans, P. C., and Marriott, Williams McKim—Infant Nutrition, A Textbook of Infant Feeding for Students and Practitioners of Medicine ..... 664
- Kahn, Samuel—Practical Child Guidance and Mental Hygiene ..... 806
- Kellner, Carl E., and Truex, Raymond C.—Detailed Atlas of the Head and Neck ..... 668
- Kelly, Emerson Crosby—Encyclopedia of Medical Sources ..... 230
- Kemp, W. N.—Value of Hormones in General Practice ..... 884
- Kinsey, Alfred C., Pomeroy, Wardell B., and Martin, Clyde E.—Sexual Behavior in the Human Male ..... 145
- Kleiner, Israel S.—Human Biochemistry ..... 804
- Lange, Jack, McDonald, Joseph J., and Chusid, Joseph G.—Correlative Neuroanatomy ..... 304
- Lawrence, Herbert—The Skin Problem Facing Young Men and Women ..... 808
- Lewin, Philip—The Foot and Ankle ..... 668
- Lichtenstein, Ben W.—A Textbook of Neuropathology ..... 883
- Lillie, R. D.—Histopathologic Technic ..... 302
- Long, Perrin H.—A-B-C's of Sulfonamide and Antibiotic Therapy ..... 306
- Luisada, Aldo A.—Heart, A Physiologic and Clinical Study of Cardio-Vascular Diseases ..... 54
- Lyons, William R., and Woodhall, Barnes—Peripheral Nerve Injuries, Atlas of ..... 884
- McDonald, Joseph J., Chusid, Joseph G., and Lange, Jack—Correlative Neuroanatomy ..... 304
- McLester, James S.—Nutrition and Diet in Health and Disease ..... 804
- Marcus, Jacob R.—Communal Sick Care in the German Ghetto ..... 306
- Marriott, Williams McKim and Jeans, P. C.—Infant Nutrition, A Textbook of Infant Feeding for Students and Practitioners of Medicine ..... 664
- Martin, Clyde E., Kinsey, Alfred C., and Pomeroy, Wardell B.—Sexual Behavior in the Human Male ..... 145
- Medical Writing, The Technic and the Art—Fishbein ..... 548
- Medicine of the Year—Youmans ..... 808
- Medullary Nailing of Kuntschner—Bohrer ..... 667
- Meleney, Frank Lamont—Clinical Aspects and Treatment of Surgical Infections ..... 372
- Merrill, Vinita—Atlas of Roentgenographic Positions ..... 808
- Mettler, Fred A.—Neuroanatomy ..... 808
- Microbiology and Pathology—Carter ..... 304
- Miller, Benjamin F.—You and Your Doctor ..... 302
- Mitscherlich, Alexander—Doctors of Infamy ..... 670
- Modern Clinical Psychiatry—Noyes ..... 667
- Muncie, Wendell—Psychobiology and Psychiatry ..... 58
- Neuroanatomy—Mettler ..... 808
- Noyes, Arthur P.—Modern Clinical Psychiatry ..... 667
- Nutrition and Diet in Health and Disease—McLester ..... 804
- Obstetrical Practice—Beck ..... 146
- Operating Room Technique—Alexander ..... 548
- Operations of General Surgery—Orr ..... 884
- Operative Gynecology—Crossen and Crossen ..... 668
- Ophthalmology, Gifford's Textbook of—Adler ..... 146
- in the War Years—Wiener ..... 302
- Orr, Thomas G.—Operations of General Surgery ..... 884
- Parenteral Alimentation in Surgery—Elman ..... 667
- Pathology—Anderson ..... 374
- A Textbook of—Boyd ..... 146
- Pediatrics and the Emotional Needs of the Child—Witmer ..... 374
- Peripheral Nerve Injuries, Atlas of—Lyons and Woodhall ..... 884
- Pharmacology and Its Applications to Therapeutics and Toxicology—Sollmann ..... 612
- Therapeutics and Prescription Writing—Bastedo ..... 58
- Pioneer Life in Kentucky—Drake ..... 302
- Pomeroy, Wardell B., Kinsey, Alfred C., and Martin, Clyde E.—Sexual Behavior in the Human Male ..... 145
- Practical Child Guidance and Mental Hygiene—Kahn ..... 806
- Preoperative and Postoperative Care of Surgical Patients—Ilgelfritz ..... 56
- Principles Governing Eye Operation Room Procedures—Clevenger ..... 547
- Psychiatry in General Practice—Thorner ..... 304
- for the Pediatrician—Shirley ..... 53
- Psychobiology and Psychiatry—Muncie ..... 58
- Psychodynamics and the Allergic Patient—Abramson ..... 804
- Psychosomatic Medicine—Weiss and English ..... 884
- Rehabilitation Through Better Nutrition—Spies ..... 667
- Robert Gould Research Foundation, Inc.—Symposia on Nutrition ..... 806
- Rosen, George—400 Years of a Doctor's Life ..... 610
- Sadler, William S.—A Doctor Talks to Teen-Agers ..... 803
- Sanford, Arthur Hawley, and Todd, James Campbell—Clinical Diagnosis of Laboratory Methods ..... 667
- Sexual Behavior in the Human Male—Kinsey, Pomeroy and Martin ..... 145
- Shands, Alfred Rives, Jr.—Handbook of Orthopaedic Surgery ..... 306
- Shirley, Hale F.—Psychiatry for the Pediatrician ..... 53
- Shultz, Gladys Denny, and Hill, Lee Forrest—Your Baby, The Complete Baby Book for Mothers and Fathers ..... 307
- Skin Manifestations of Internal Disorders—Wiener ..... 230
- Problem Facing Young Men and Women, The—Lawrence ..... 808
- Sollmann, Torald—Pharmacology and Its Applications to Therapeutics and Toxicology ..... 612
- Spies, Tom D.—Rehabilitation Through Better Nutrition and Thompson, Willard O.—The 1946 Yearbook of Endocrinology, Metabolism and Nutrition ..... 806
- Standards for the Diagnosis and Treatment of Cancer—Cancer Committee of the Iowa State Medical Society ..... 547
- Stieglitz, Edward J.—Geriatric Medicine ..... 808
- Sutton, Richard L.—Handbook of Diseases of the Skin ..... 610, 804
- Symposia on Nutrition—Robert Gould Research Foundation, Inc. ..... 806
- Synopsis of Pathology—Anderson ..... 450
- of Psychosomatic Diagnosis and Treatment—Dunbar ..... 307
- Technique of Treatment for the Cerebral Palsy Child—Egel ..... 306
- Textbook of Neuropathology, A—Lichtenstein ..... 883
- Thienes, Clinton H., and Haley, Thomas J.—Clinical Toxicology ..... 610
- Thompson, Willard O., and Spies, Tom D.—The 1946 Yearbook of Endocrinology, Metabolism and Nutrition ..... 806
- Thorner, Melvin W.—Psychiatry in General Practice ..... 304
- Todd, James Campbell, and Sanford, Arthur Hawley—Clinical Diagnosis of Laboratory Methods ..... 667
- Top, Franklin H.—Communicable Diseases ..... 668
- Treatment in General Practice—Beckman ..... 304
- of Heart Disease—Brans ..... 54
- Truex, Raymond C., and Kellner, Carl E.—Detailed Atlas of the Head and Neck ..... 668
- Turner, C. Donnell—General Endocrinology ..... 54
- Value of Hormones in General Practice—Kemp ..... 884
- War, Politics and Insanity—Bluemel ..... 374
- Watson, Leigh F.—Hernia, Anatomy, Etiology, Symptoms, Diagnosis, Differential Diagnosis, Prognosis and Treatment ..... 548
- Weiss, Edward, and English, O. Spurgeon—Psychosomatic Medicine ..... 884
- Wiener, Kurt—Skin Manifestations of Internal Disorders ..... 230
- Meyer—Ophthalmology in the War Years ..... 302



Willius, Frederick A., and Dry, Thomas J.—Heart and Circulation, A History of the .....	58
Wiprud, Theodore—The Business Side of Medical Practice .....	804
Witmer, Helen L.—Pediatrics and the Emotional Needs of the Child .....	374
Woodhall, Barnes, and Lyons, William R.—Peripheral Nerve Injuries, Atlas of .....	884
Yearbook of Endocrinology, Metabolism and Nutrition, The 1946—Thompson and Spies .....	806
You and Your Doctor—Miller .....	302
Youmans, John B.—Medicine of the Year .....	808
Your Baby, The Complete Baby Book for Mothers and Fathers—Shultz and Hill .....	307
Bristow, Robert B., and Knepper, Paul A.—Phytobezoars, with Gastric Ulcer, Complicated by Intestinal Obstruction .....	339
Brooker, Robert M., et al—Hypertension .....	855
—Polyarteritis Nodosa .....	414
Brown, James Barrett, et al—Symposium on Trauma .....	701
Manson, and Mahorner, Howard—Selection of an Operation for Lesions of the Colon and Rectum .....	577
"Buy British"—Editorial .....	196

## C

Cancer Treatment at the Ellis Fischel State Cancer Hospital, Five Year Results of—Modlin .....	485
What are the Common Types of?—Keyes and Rindskopf .....	356
Carcinoid of the Stomach, Massive Hemorrhage from—Scherman, Hara, and Trafton .....	175
Carcinoma of the Colon and Rectum—Sugarbaker .....	421
Carmichael, F. A., Jr., et al—Symposium on Trauma .....	701
Casberg, Melvin A.—Transabdominal Vagotomy: The Surgical Technic, Preoperative and Postoperative Care .....	843
Centennial of the Association—Editorial .....	597
Child Health Services in Missouri—White and Dwyer .....	17
Clapp, Roger W.—Glutamic Acid in the Treatment of Mentally Handicapped Children .....	181
Clay County Medical Society Will Hold Clinical Conference—Organization Activities .....	796
Clinical Experiences with the Diagnosis of Asthma—Eyer- mann .....	767
Colon and Rectum, Selection of an Operation for Lesions of the—Mahorner and Brown .....	577
Color Television to be Feature of 100th Anniversary Session of the Association—Editorial .....	791
Committee of 53 Physicians, The—Editorial .....	293
on Conservation of Eyesight—Organization Activities .....	297
on Health and Public Instruction—Organization Activities .....	875
Coronary Heart Disease—Estes .....	99
Correspondence—	
National Foundation for Infantile Paralysis .....	878
Costello, Cyril—Improved Methods in Combatting Tetanus .....	582
and McDonald, James—The Role of a New Analgesic in Surgery .....	333
Council, The—Organization Activities .....	362, 436, 794
Current Status of Routine Chest X-Raying in General Hospitals of the United States, The—Miscellany .....	300

## D

Dann, David S.—Roentgen Therapy .....	108
Death Rates in 1948—Editorial .....	435
Deaths—	
Bansbach, Joseph J. ....	200
Barber, M. D. ....	46
Black, W. Byron .....	875
Bosserman, David C. ....	492
Bradley, Arthur H. ....	492
Bridges, Andrew D. ....	200
Buhman, Rudolph .....	297
Bulkley, Clarence H. ....	116
Conrad, Harry S. ....	46
Cook, Thomas F. ....	297
Cordry, Harold C. ....	875
Curdy, Robert J. ....	116
Davis, Charles B. ....	603
Davis, Phillips N. ....	794
Doyle, William J. ....	116
Duemler, Rutherford S. ....	492
Duff, Talbot S. ....	875
Elz, Julius T. ....	446
Ewerhardt, F. H. ....	116
Ferris, Joseph L. ....	492
George, Charles A. ....	116
Graves, William W. ....	446
Gray, Samuel H. ....	730
Green, John .....	362
Guhman, Charles N. ....	492
Guyot, J. DeVoine .....	46
Hall, Darwin Walton .....	297
Hamilton, Eugene P. ....	46
Hardy, William F. ....	492
Hollis, Luther T. ....	730
Hyde, Frank .....	200
James, Luther S. ....	116
Jaudon, Benjamin Y. ....	728
Kennedy, Thomas Robert .....	492
Kieffer, Victor B. ....	603
Knappenberger, George E. ....	200

Koritschoner, Robert .....	46
Krause, Irl B. ....	600
Krueger, Owen W. ....	492
Loveland, William S. ....	603
Lusk, Charles A. ....	730
McCall, Greene D. ....	730
Mellies, Chester J. ....	730
Meredith, Arnold L. ....	116
Meredith, Joseph J. ....	656
Mitchell, John E. ....	603
Moreland, George H. ....	200
Morley, Frank R. ....	116
Myers, Myron A. ....	794
Neuhoff, Fritz .....	730
Nichols, Charles B. ....	875
Parker, Ray H. ....	603
Patton, Frederick W. ....	656
Pinion, John R. ....	362
Pryor, Harry Blackburn .....	446
Rosenberger, Charles F. ....	730
Rosenwald, Leon .....	446
Russell, John J. ....	603
Russell, Richard Lee .....	200
Sanders, Clarence E. ....	446
Shrader, Eugene W. ....	200
Smith, Clinton K. ....	116
Smith, Dudley R. ....	730
Smith, James E. ....	116
Sparhawk, William J. ....	600
St. Clair, Robert L. ....	794
Thierry, Charles W. ....	656
Thompson, Nathan P. ....	46
Thym, Herman H. ....	794
Urban, Emanuel T. ....	446
Wachenfeld, Carl H. ....	46
Walker, Grant D. ....	446
Wasson, Wesley B. ....	492
Waugh, Clifton M. ....	492
Wilhelmy, Ellis W. ....	448
Wolff, Charles .....	362
Womack, James R. ....	46
Woodridge, Alexander G. ....	200
Yeargain, John P. ....	656
Dermatitis Due to Bal (2,3-dithiopropanol)—Hagemann and Bagby .....	775
of the Hands—Sutton .....	410
Diabetes Detection Drive, St. Louis—MacBryde .....	776
Diseases of the Newborn—Singleton and Atwell .....	770
Double Symmetric Monsters—Ossman and Wiley .....	348
Duncan, Robert D., et al—Symposium on Trauma .....	708
Dwyer, Hugh L., and White, Park J.—Child Health Service in Missouri .....	17

## E

Ectopic Pregnancy—Masters .....	405
Editor Says U. S. Money Props Britain's Socialized Medicine—Miscellany .....	494
Editorials—	
American Medical Association Assessment .....	435
Interim Session .....	43
Session Open to All Members .....	359
Annual Session .....	43, 115, 195, 873
Atlantic City Meeting .....	490
Average Age of Physicians Declines .....	115
Bloom, W. A., M.D., President-Elect .....	359
"Buy British" .....	196
Centennial of the Association .....	597
Color Television to be Feature of 100th Anniversary Session of the Association .....	791
Committee of 53 Physicians, The .....	293
Death Rates in 1948 .....	435
Father Schwitalla .....	43
Handbook Roster .....	791
Iodine and Nutrition .....	791
Kansas City Southwest Clinical Society Fall Conference .....	655
Medical Care Costs Compared with Cost of Living Index .....	293
Medicine in the News .....	597
Memorial in Honor of Dr. Bredeck .....	44
Missouri's Mental Institutions .....	44
Missouri State Medical Association Visits the Missouri State Fair .....	727
National Commission on Chronic Illness Formed .....	490
Ninety-First Annual Session .....	360
Physician Heal Thyself .....	728
Preventive Medicine and Smallpox .....	655
Program of the American Medical Association for the Advancement of Medicine and Public Health .....	195
Reporting Medicine for the Public .....	873
Taxation .....	655
Electrocardiographic Changes in Coronary Artery Disease —Barker .....	646
Endometrioma of the Umbilicus—Printz, Printz and Rubin .....	479
Estes, A. M.—Coronary Heart Disease .....	99
Examination of the Male for Sterility—Melick .....	344
Eyer mann, Charles H.—Clinical Experiences with the Diag- nosis of Asthma .....	767

## F

Farm Bureau Opposes National Program of Compulsory Health Insurance—Miscellany .....	222
---	-----

- Father, Schwitalla—Editorial ..... 43  
 Financial Statement for 1948—Organization Activities ..... 224  
 Five Year Results of Cancer Treatment at the Ellis Fischel State Cancer Hospital—Modlin ..... 485  
 Fleming, Thomas S.—A Method of Using the Chest Strap for Precordial Leads ..... 488  
 Foley, William T.—The Use of Anticoagulants in the Treatment of Diseases of the Heart and Blood Vessels with Special Reference to Long Term Anticoagulant Therapy ..... 643  
 Foreign Body in the Bladder—Andrews and Goldman ..... 338
- G
- Glutamic Acid in the Treatment of Mentally Handicapped Children—Clapp ..... 181  
 Goldman, Max, and Andrews, Berneil W.—Foreign Body in the Bladder ..... 338  
 Grass Roots Conference—Miscellany ..... 444  
 Greene County Receives Praise—Miscellany ..... 444
- H
- Hackmeyer, R.—A Method of Avoiding Operative Stricture Following Hemorrhoidectomy ..... 850  
 Hagemann, Paul O., and Bagby, James W.—Dermatitis Due to Bal (2,3—dithiopropanol) ..... 775  
 Handbook Roster—Editorial ..... 791  
 Hara, Mas, Scherman, Victor E., and Trafton, Harold F.—Massive Hemorrhage from Carcinoid of the Stomach ..... 175  
 Hawley, Paul R.—The Issue of Compulsory Health Insurance ..... 715  
 Hemorrhoidectomy, Method of Avoiding Operative Stricture Following—Hackmeyer ..... 850  
 Hoarseness—Proud ..... 354  
 Holthaus, Joseph M., and Bernreiter, Michael—Primary Atypical Pneumonia Treated with Aureomycin ..... 420  
 Hypertension—Paul A. Knepper, Louis G. Neudorff, Robert M. Brooker, and John R. McDaniel ..... 855  
 Hypoglycemia of the Newborn Infant—Wachter ..... 837
- I
- Improved Methods in Combatting Tetanus—Costello ..... 582  
 Industrial Health—Miscellany ..... 732  
 Interpreting Medicine for the Layman—Steven Spencer—Special Article ..... 862  
 Iodine and Nutrition—Editorial ..... 791  
 Issue of Compulsory Health Insurance, The—Hawley ..... 715
- J
- Joint Meeting of the Kansas City Dermatological Society and the St. Louis Dermatological Society—Miscellany ..... 220  
 Jostes, Fred A., et al.—Symposium on Trauma ..... 708
- K
- Kansas City Southwest Clinical Society Fall Conference—Editorial ..... 655  
 Pediatric Society—Miscellany ..... 120  
 Keyes, E. Lawrence, and Rindskoph, Wallace, Jr.—What are the Common Types of Cancer? ..... 356  
 Knepper, Paul A., and Bristow, Robert B.—Phytobezoars, with Gastric Ulcer, Complicated by Intestinal Obstruction ..... 339  
 Neudorff, Louis G.; Brooker, Robert M., and McDaniel, John R.—Hypertension ..... 855  
 Kulowski, Jacob, et al.—Symposium on Trauma ..... 701
- L
- Laboratory Diagnosis of Amebiasis, The—MacDonald ..... 477  
 Licensure of Foreign Medical Graduates—Miscellany ..... 603  
 Lock, Frank R., and Whitener, Donald L.—Responsibility of the Physician in the Management of Premature Labor and the Early Neonatal Care of the Infant ..... 637  
 Lung Cancer, The Problem of—Woods ..... 765
- M
- MacBryde, Cyril M.—St. Louis Diabetes Detection Drive ..... 776  
 MacDonald, William C.—The Laboratory Diagnosis of Amebiasis ..... 477  
 McDaniel, John R., et al.—Hypertension ..... 855  
 McDonald, James, and Costello, Cyril—The Role of a New Analgesic in Surgery ..... 333  
 Mahorner, Howard, and Brown, Manson—Selection of an Operation for Lesions of the Colon and Rectum ..... 577  
 Management of Prostatism, The—Patton ..... 649  
 Marmor, William A.—Rhinoplasty, Its Relation to Deviation of the Nasal Septum ..... 773  
 Massive Hemorrhage from Carcinoid of the Stomach—Scherman, Hara, and Trafton ..... 175  
 Masters, William H.—Ectopic Pregnancy ..... 405  
 Maternal Mortality—Miscellany ..... 368  
 Medical Care Costs Compared with Cost of Living Index—Editorial ..... 293  
 Public Relations Conference—Miscellany ..... 46  
 Medicine in the News—Editorial ..... 597  
 Melick, William F.—Examination of the Male for Sterility ..... 344  
 Memorial in Honor of Dr. Bredeck—Editorial ..... 44
- Method of Avoiding Operative Stricture Following Hemorrhoidectomy—Hackmeyer ..... 850  
 of Using the Chest Strap for Precordial Leads, The—Fleming ..... 488  
 Meyerhardt, Milton H.—Spontaneous Rupture of the Uterus in Late Pregnancy Accompanied by Placenta Accreta ..... 177
- Miscellany—
- American Medical Association Assessment ..... 440  
 Interim Session ..... 798  
 Provides \$25,000 to Set Up Chronic Illness Commission ..... 298  
 Army Needs Medical Officers in Japan ..... 798  
 Births in Hospitals ..... 660  
 Current Status of Routine Chest X-Raying in General Hospitals of the United States, The ..... 300  
 Editor Says U. S. Money Props Britain's Socialized Medicine ..... 494  
 Farm Bureau Opposes National Program of Compulsory Health Insurance ..... 222  
 Grass Roots Conference ..... 444  
 Greene County Receives Praise ..... 444  
 Industrial Health ..... 732  
 Joint Meeting of the Kansas City Dermatological Society and the St. Louis Dermatological Society ..... 220  
 Kansas City Southwest Pediatric Society ..... 120  
 Licensure of Foreign Medical Graduates ..... 603  
 Maternal Mortality ..... 368  
 Medical Public Relations Conference ..... 46  
 Missouri Chapter, American Trudeau Society ..... 220  
 Society for Neurology and Psychiatry ..... 220  
 Municipal Election, The ..... 443  
 N. P. C. Disbands Organization ..... 366  
 Prepayment Medical Care ..... 444  
 School Health Questionnaire ..... 369  
 Statement of H. E. Slusher on Behalf of the American Farm Bureau Federation, on a National Health Program, Before the Health Subcommittee of the Committee on Education and Labor of the United States Senate, June 21, 1949 ..... 656  
 Television May Help Protect Eyesight ..... 798  
 Tuberculosis Abstracts ..... 48, 444, 606, 662, 730, 800, 887  
 Missouri Chapter, American Trudeau Society—Miscellany ..... 220  
 Society for Neurology and Psychiatry, The—Miscellany ..... 220  
 State Medical Association Visits the Missouri State Fair—Editorial ..... 727  
 Missouri's Mental Institutions—Editorial ..... 44  
 Modlin, John—Five Year Results of Cancer Treatment at the Ellis Fischel State Cancer Hospital ..... 485  
 Monsters, Double Symmetric—Ossman and Wiley ..... 348  
 Moore, Robert A.—The Physician and the Law ..... 779  
 Municipal Election, The—Miscellany ..... 443  
 Musings of the Field Secretary ..... 46, 116, 199, 296, 362, 436, 491, 600, 656, 728, 792, 874
- N
- National Commission of Chronic Illness Formed—Editorial ..... 490  
 Foundation for Infantile Paralysis—Correspondence ..... 878  
 Need of Belonging in War and Peace: Its Effect on Delinquency, The—Blackman ..... 417  
 Neudorff, Louis G., et al.—Hypertension ..... 855  
 Newborn, Diseases of the—Singleton and Atwell ..... 770  
 News Notes ..... 44, 115, 199, 294, 360, 435, 491, 598, 655, 728, 792, 874  
 Ninety-First Annual Session—Editorial ..... 360  
 Organization Activities ..... 116, 200  
 N. P. C. Disbands Organization—Miscellany ..... 366
- O
- Organization Activities—
- Amendment to the Constitution ..... 122, 227  
 Annual Session Minutes ..... 496  
 Registration ..... 543  
 Clay County Medical Society Will Hold Clinical Conference ..... 796  
 Committee on Conservation of Eyesight ..... 297  
 on Health and Public Instruction ..... 875  
 Council, The ..... 362, 436, 794  
 Financial Statement for 1948 ..... 224  
 Ninety-First Annual Session ..... 116, 200  
 Scientific Exhibits ..... 207  
 Technical Exhibits ..... 118, 209  
 Ossman, Julian A., and Wiley, Horace M.—Double Symmetric Monsters ..... 348  
 Overholser, Winfred—Some Contributions of Psychiatry to General Medicine ..... 573
- P
- Patton, John F.—The Management of Prostatism ..... 649  
 Physician and the Law, The—Moore ..... 779  
 Heal Thyself—Editorial ..... 728  
 Phytobezoars, with Gastric Ulcer, Complicated by Intestinal Obstruction—Knepper and Bristow ..... 339  
 Pitressin Test—Bernreiter ..... 102  
 Placenta Accreta, Spontaneous Rupture of the Uterus in Late Pregnancy Accompanied by—Meyerhardt ..... 177  
 Pneumonia, Primary Atypical, Treated with Aureomycin—Bernreiter and Holthaus ..... 420  
 Polyarteritis Nodosa—Brooker ..... 414  
 Practical Aspects of the Diet in Pregnancy—White ..... 430  
 Precordial Leads, A Method of Using the Chest Strap for—Fleming ..... 488  
 Pregnancy, Practical Aspects of the Diet in—White ..... 430



Sodium Pregnanediol Glucuronide Determinations in the Diagnosis of—Yanow and Soule .....	591
Premature Labor and the Early Neonatal Care of the Infant, Responsibility of the Physician in the Management of—Lock and Whitener .....	637
Prepayment Medical Care—Miscellany .....	444
President's Page .....	42, 112, 194, 292, 358, 434, 489, 596, 654, 726, 790, 872
Preventive Medicine and Smallpox—Editorial .....	655
Primary Atypical Pneumonia Treated with Aureomycin—Bernreiter and Holthaus .....	420
Printz, Joseph H., Printz, O. J., and Rubin, Sidney—Endometrioma of the Umbilicus .....	479
Printz, Joseph H., and Rubin, Sidney—Endometrioma of the Umbilicus .....	479
Problem of Lung Cancer, The—Woods .....	765
Program of the American Medical Association for the Advancement of Medicine and Public Health—Editorial .....	195
Prostatism, The Management of—Patton .....	649
Proud, G. O'Neil—Hoarseness .....	354
Psychiatry to General Medicine, Some Contributions of—Overholser .....	573

R

Reporting Medicine for the Public—Editorial .....	873
Responsibility of the Physician in the Management of Premature Labor and the Early Neonatal Care of the Infant—Lock and Whitener .....	637
Rhinoplasty, Its Relation to Deviation of the Nasal Septum—Marmor .....	773
Rindskopf, Wallace, Jr., and Keyes, E. Lawrence—What Are the Common Types of Cancer? .....	356
Rinkel, Herbert J.—Allergy Problems .....	91
Robinson, David W., et al.—Symposium on Trauma .....	708
Roentgen Therapy—Dann .....	108
Role of a New Analgesic in Surgery, The—Costello and McDonald .....	333
Roster of Members by County Society .....	122
Rowlette, A. P., et al.—Symposium on Trauma .....	701
Rubin, Sidney, Printz, O. J., and Printz, Joseph H.—Endometrioma of the Umbilicus .....	479

S

St. Louis Diabetes Detection Drive—MacBryde .....	776
Scherman, Victor E., Hara, Mas, and Trafton, Harold F.—Massive Hemorrhage from Carcinoid of the Stomach .....	175
School Health Questionnaire—Miscellany .....	369
Scientific Exhibits—Organization Activities .....	207
Selection of an Operation for Lesions of the Colon and Rectum—Mahorner and Brown .....	577
Singleton, J. Milton, and Atwell, Floyd C.—Diseases of the Newborn .....	770
Smolik, Edmund A., et al.—Symposium on Trauma .....	708
Society Proceedings—	
Barton-Dade County Medical Society .....	120
Caldwell-Livingston County Medical Society .....	369
Charlton-Macon-Monroe-Randolph Counties Medical Society .....	369
Clay County Medical Society .....	875
Cole County Medical Society .....	369
County Society Honor Roll 1949 .....	734
Eighth Council District .....	227, 298, 372, 448, 493, 608, 664, 877
Fifth Council District .....	50
Grundy-Davies County Medical Society .....	120, 876
Harrison County Medical Society .....	120
Lincoln County Medical Society .....	50, 603
Pettis County Medical Society .....	369, 493
PHELPS-Crawford-Dent-Pulaski County Medical Society .....	603
St. Francois-Iron-Madison-Washington-Reynolds County Medical Society .....	370, 450, 493, 803, 877
St. Louis County Medical Society .....	230, 369, 448, 492, 803, 876
St. Genevieve County Medical Society .....	230
Second Council District .....	50, 492
Sixth Council District .....	448, 877
South Central Counties Medical Society .....	53, 120, 230, 370, 448, 603, 664, 734
Tenth Council District .....	53, 450, 803
Sodium Pregnanediol Glucuronide Determinations in the Diagnosis of Pregnancy—Yanow and Soule .....	591
Some Contributions of Psychiatry to General Medicine—Overholser .....	573
Soule, S. D., and Yanow, M.—Sodium Pregnanediol Glucuronide Determinations in the Diagnosis of Pregnancy .....	591
Spencer, Steven—Interpreting Medicine for the Layman—Special Article .....	862
Spontaneous Rupture of the Uterus in Late Pregnancy Accompanied by Placenta Accreta—Meyerhardt .....	177
Statement of H. E. Slusher on Behalf of the American Farm Bureau Federation, on a National Health Program, Before the Health Subcommittee of the Committee on Education and Labor of the United States Senate, June 21, 1949—Miscellany .....	656
Sterility, Examination of the Male for—Melick .....	344
Stout, Arthur Purdy—Tumor Seminar .....	259
Tumors of the Peripheral Nervous System .....	255
Student Loan Fund—Woman's Auxiliary .....	53
Sugarbaker, Everett D.—Carcinoma of the Colon and Rectum .....	421

Surgical Management of Cancer Patients—Wiley and Sugarbaker .....	182
Sutton, Richard L., Jr.—Dermatitis of the Hands .....	410
Symposium on Trauma—Aiken, et al. ....	701
Bloom, et al .....	708

T

Taxation—Editorial .....	655
Technical Exhibits—Organization Activities .....	118, 209
Television May Help Protect Eyesight—Miscellany .....	798
Tetanus, Improved Methods in Combating—Costello .....	582
Trafton, Harold F., Scherman, Victor E., and Hara, Mas—Massive Hemorrhage from Carcinoid of the Stomach .....	175
Transabdominal Vagotomy: The Surgical Technic, Preoperative and Postoperative Care—Casberg .....	843
Transurethral Prostatectomy—Beare and Wattenberg .....	482
Trauma, Symposium on—Aiken, et al. ....	701
Bloom, et al .....	708
Tuberculosis Abstracts—Miscellany .....	48, 444, 606, 662, 730, 800
Tumor Seminar—Stout .....	
Carcinoma (Adenoma Malignum Type) of Humerus, Metastatic From the Thyroid .....	290
of the Rectum (Metastatic?) .....	266
Fibrosarcoma of Cicatrix of Thoracic Wall .....	272
Granuloma of the Lung .....	268
Kaposi's Disease .....	273
Lymphosarcoma, Lymphocytic Cell Type, of the Temporal Region .....	277
Malignant Melanoma of the Anal Canal .....	265
Multiple Squamous Cell Epitheliomas of the Scalp Arising from Hair Follicles (?) or Sebaceous Cysts (?) .....	259
Myxoma of Zygomatic Bone .....	279
Papillary Carcinoma of Nasal Cavity .....	263
of the Thyroid .....	286
Squamous Cell Epithelioma of Gum of Mandible .....	262
Plasmocytoma of Inframammary Region .....	275
Plexiform Neurofibroma of Back .....	269
Thymoma in a Case of Myasthenia Gravis .....	270
Undiagnosed Condition of Lung and Sacrum (Osteogenic Sarcoma?, of Metastasizing Giant Cell Tumor?) ..	282
Tumors of the Peripheral Nervous System—Stout .....	255

U

Use of Anticoagulants in the Treatment of Diseases of the Heart and Blood Vessels with Special Reference to Long Term Anticoagulant Therapy, The—Foley .....	643
--	-----

V

Vagotomy, Transabdominal: The Surgical Technic, Preoperative and Postoperative Care—Casberg .....	843
---	-----

W

Wachter, H. Ewing—Hypoglycemia of the Newborn Infant .....	837
Wattenberg, Carl A., and Beare, J. Byron—Transurethral Prostatectomy .....	482
What Are the Common Types of Cancer?—Keyes and Rindskopf .....	356
White, Park J., and Dwyer, Hugh L.—Child Health Services in Missouri .....	17
R. Ned—Practical Aspects of the Diet in Pregnancy .....	430
Whitener, Donald L., and Lock, Frank R.—Responsibility of the Physician in the Management of Premature Labor and the Early Neonatal Care of the Infant .....	637
Wiley, Horace M., and Ossman, Julian A.—Double Symmetric Monsters .....	348
and Sugarbaker, Everett D.—Surgical Management of Cancer Patients .....	182
Woman's Auxiliary—Student Loan Fund .....	53
to the Missouri State Medical Association .....	370
Woods, Francis M.—The Problem of Lung Cancer .....	765

Y

Yanow, M., and Soule, S. D.—Sodium Pregnanediol Glucuronide Determinations in the Diagnosis of Pregnancy .....	591
--	-----

## BOOK REVIEWS

VALUE OF HORMONES IN GENERAL PRACTICE, THE. By W. N. Kemp, M.D., Vancouver, B.C. Burgess Publishing Co. Minneapolis, Minn. 1949. Price \$3.00.

According to the preface, "this manual has been prepared for the express purpose of assisting general practitioners in the fullest possible utilization of the many pharmaceutical hormonal preparations now available." This ambitious aim is attempted in 115 pages of a loose-leaf mimeographed manual which is in reality a very brief synopsis of the entire field of clinical

endocrinology. Practically all standard endocrine subjects which are usually found in large textbooks are described briefly and sketchily; including some physiology, pathology, differential diagnosis and prognosis. Treatment is described in an even more abbreviated manner. For instance, the treatment of hyperthyroidism is contained in about ten lines and concerns itself almost exclusively with the administration of thiouracil. The treatment of menstrual disturbances, sterility and other equally important subjects are described equally briefly. The discussion of many clinical syndromes is so elementary as to be quite useless.

The book abounds in loose statements, personal opinions not generally accepted, half statements, typographical errors and in words and phrases rarely encountered in serious scientific literature.

The author has attempted to assist the general practitioner "in the fullest possible utilization" of endocrine products in general practice. He has succeeded in adding little to the general practitioner's knowledge. I believe and hope that the general practitioner already knows more endocrinology than this book attempts to tell him. This might be a good manual for nurses, to serve as an introduction to endocrinology L. C.

---

A TEXTBOOK OF NEUROPATHOLOGY, With Clinical, Anatomical and Technical Supplements. By Ben W. Lichtenstein, B.S., M.S., M.D. Associate Professor of Neurology, University of Illinois College of Medicine; State Neuropathologist, Illinois Neuropsychiatric Institute; Attending Neurologist, Cook County Hospital; Professor of Neurology, the Cook County Graduate School of Medicine, Attending Neurochirist, Mount Sinai Hospital, Chicago. Illustrated. W. B. Saunders Company. Philadelphia-London. 1949. Price \$9.50.

From a time not long since when there was no text dealing with neuropathology and one had to run to the literature for every last detail there is now almost a spate of such books. It is a comfort to have them available. The present work is the most extensive and exhaustive one that has yet appeared. It is really satisfactory with accurate information, good illustrations and an adequate bibliography.

There still remains a gap, however, between pathologic changes and the clinical picture. Those who expect the anatomical findings to give the key to clinical symptoms will be disappointed. Perhaps the pathogenesis of dementia praecox and epilepsy are too vague to merit space in a text book. But there is some information available bearing on extrapyramidal syndromes and on convulsions. An interesting subject is the pathogenesis of tabes dorsalis. Another is the lack of correspondence between the severity of the changes in general paresis and the clinical expression. Still another is the possible reason why one practically always finds hemiplegia rather than frequently monoplegia in cerebral focal lesions. In fact the cerebral injury tells little about associated findings. The pathologist should probably go into such questions sooner or later.

The present work is excellent of its kind and is heartily recommended. L. B. A.

---

OPERATIONS OF GENERAL SURGERY by Thomas G. Orr, M.D., Professor of Surgery, University of Kansas School of Medicine, Kansas City, Kansas. Second

Edition with 1700 step-by-step illustrations on 721 figures. W. B. Saunders Company. Philadelphia and London. 1949. Price \$13.50.

The author states that the reason for this book is to provide an operative surgery which contains the essentials of surgi-technic in the field of general surgery.

The text and references comprise 864 pages, divided into twenty-one chapters. Chapters 1, 2, and 3 ("Wound Healing," "Treatment of Fresh Wounds" and "Sutures and Knots") present the principles of surgery without which good surgery is not possible. These principles are well presented. In the remaining eighteen chapters the author presents the material by systems or regions of the body, thus emphasizing the general surgery features of the book. The author briefly describes the anatomy, dangers and safeguards and indications for operation. There are numerous additions to this second edition, especially in the chapters on gastrointestinal surgery, hernia repair (Coopers' ligament technic), chest surgery and cardiovascular surgery. The book is well illustrated with 1700 step-by-step illustrations on 721 figures. A very thorough index completes the book.

This book is recommended for the intern, surgical resident, man doing his own surgery, and the general surgeon S. V.

---

PERIPHERAL NERVE INJURIES, ATLAS OF. By William R. Lyons, Ph.D., Associate Professor of Anatomy, University of California Medical School and Barnes Woodhall, M.D., Professor of Neurosurgery, Duke Medical School, Durham, North Carolina. W. B. Saunders Company. Philadelphia and London. 1949. Price \$16.00.

During the last war many injuries to peripheral nerves were sustained. The manner of treatment was for the most part a matter of record, pathologic material was available and the patients were followed for varying intervals. The authors have done a fine job in presenting the material in all phases and coming to logical conclusions. Because of the variegated cases represented in great numbers, definite ideas can be formulated concerning the type of suture, time of optimum suture. Furthermore, there is a greater insight into the natural history of peripheral nerve lesions, and the histologic and morphologic picture in nerve injuries sustained at different time intervals.

In addition to the valuable conclusions afforded by this atlas, there are numerous beautiful illustrations, many of them photomicrographs. Individual nerve lesions are presented with brief history, pertinent pictorial histologic appearance and interpretation.

The perusal of this book is well worth while for those who encounter injuries of the peripheral nerves. R. L.

---

PSYCHOSOMATIC MEDICINE, The Clinical Application of Psychopathology to General Medical Problems. By Edward Weiss, M.D., Professor of Clinical Medicine, Temple University Medical School, Philadelphia, and O. Spurgeon English, M.D., Professor of Psychiatry, Temple University Medical School, Philadelphia. Second Edition. W. B. Saunders Company. Philadelphia and London. 1949. Price \$9.50.

This is the second edition of this work and consequently there is a greater obligation than before to





A complete line for clinical laboratories devoted to all branches of chemistry, bacteriology, hematology, and parasitology. Tested and checked in our own clinical laboratories. Purity warranted. Our facilities assure prompt shipment of large or small orders. Inquiries invited.

## COMPLETE CATALOG

Reagents catalogued alphabetically—also according to subjects and techniques, plus medical reference guide. Catalog comprises full line blood testing sera including anti-Rh, anti-M and anti-N; also reagents for Wassermann, Kline, and Kalin tests. Write for your copy. FREE ON REQUEST.

and Medical  
Reference  
Guide



# GRADWOHL

LABORATORIES

R. B. H. Gradwohl, M. D., Director  
3514 Lucas Av. St. Louis, Mo.



## ... FOOT ACTION!

THE mechanical foot action of Hanger Artificial Legs allows a close approximation of natural walking for their wearers. The forward and backward motion and rubber cushions absorb shock and give the flexibility of motion so important in maintaining an even stride. This is one more example how the goal of Hanger design and development is to allow the amputee to resume life's normal functions. Throughout, Hanger Limbs are constructed of a few parts simply assembled to reduce unnecessary breakdowns and repairs.

# HANGER

ARTIFICIAL LIMBS

1912-14 Olive Street  
St. Louis 3, Missouri

## Prescription Perfect



RED LABEL • BLACK LABEL

Both 86.8 Proof

Every drop of Johnnie Walker is made in Scotland—using only Scotland's crystal-clear spring water. Every drop of Johnnie Walker is distilled with the skill and care that comes from many generations of fine whisky-making.

Every drop of Johnnie Walker is guarded all the way to give you *perfect* Scotch whisky... the same high quality the world over.



Born 1820... still going strong

# JOHNNIE WALKER

BLENDED SCOTCH WHISKY

Canada Dry Ginger Ale, Inc., New York, N. Y., Sole Importer

examine critically the book in particular and the concept of psychosomatic medicine in general. The book turns out to be no more than a presentation of the functional viewpoint, for the most part, so one wonders why the title "*Psychosomatic Medicine*" was used. The "psychosomatic medicine" of these workers is a different brew from that of the Flanders Dunbar group. This is confusing.

While the functional viewpoint is well presented on the whole, it is possible to think of many objections concerning details. Did the emotional state in that case really cause the coronary occlusion? Is an anxiety state associated with a moderate heart disease or some other such organic condition really worth presentation as a case record? The occurrence is common enough and proves little. It would be nice if a few superficial adjustments in living conditions always helped the patient as much as it is said to do in some of the cases presented:

The examples in the gastrointestinal field are run of the mill cases. They should come to the attention of practitioners and surgeons, who, alas, are mostly too busy to read this book. It is stated that the most organically minded recognize the emotional factors in gastric ulcer. One hopes they are right in doing so. Ulcer, hypertension, menstrual disturbance, headache, obesity and the like would be better discussed in general rather than predominantly from one aspect. Otherwise students will make a lot of mistakes in diagnosis and treatment when they come to practice. The writers are almost guilty of the error of other workers in discussing headache without mentioning allergy. Unfortunately they still accept Simmond's disease.

One requires more than a say-so to be satisfied that the "either-or" in physical and psychologic affections is removed or that all medicine tends to become psychosomatic medicine. Perhaps psychiatrists are "progressing" too fast. The book is long, detailed and inclusive. One hopes there are those who are able to read and digest it all, for on the whole it is a good book.

School, University of Chicago. Illustrated. Third Edition. St. Louis: C. V. Mosby Company. 1947. Price \$3.75.

**HISTORY OF MEDICINE, A Correlative Text Arranged According to Subjects.** By Cecilia C. Mettler, A.B., Ed.B., A.M., Ph.D., Late Assistant Professor of Medical History, University of Georgia, School of Medicine, and late Associate in Neurology, College of Physicians and Surgeons, Columbia University. Edited by Fred A. Mettler, A.M., M.D., Ph.D., Associate Professor of Anatomy, College of Physicians and Surgeons, Columbia University. With 16 Illustrations. Philadelphia, Toronto: Blakiston Company. 1947. Price \$8.50.

**MICROBIOLOGY FOR NURSES, Laboratory Manual.** By Elizabeth S. Gill, B.S., R.N., Instructor in Nursing, Department of Nursing, College of Physicians and Surgeons, Columbia University, New York; and James T. Culbertson, Ph.D., Professor of Bacteriology and Parasitology, University of Arkansas School of Medicine, Little Rock, Arkansas; formerly Assistant Professor of Bacteriology, College of Physicians and Surgeons, Columbia University, New York. New York: G. P. Putnam's Sons. 1947. Price \$1.50.

**SYNOPSIS OF NEUROPSYCHIATRY.** By Lowell S. Selling, M.D., Ph.D., Dr.P.H., F.A.C.P., Director, Division of Mental Health, Florida Department of Health; Formerly, Attending Neuropsychiatrist, Deaconess Hospital; Associate Attending Neuropsychiatrist, Mt. Carmel Mercy Hospital, and Wayne County General Hospital; Director, Psychopathic Clinic, Recorder's Court, Detroit, Michigan; Assistant Professor of Criminology, Medical Jurisprudence and Social Hygiene, University of Illinois College of Medicine; Lecturer in Psychology, Wayne University; Visiting Professor of Psychology, Iowa State College. Illustrated. Second Edition. St. Louis: C. V. Mosby Company. 1947. Price \$6.50.

## BOOKS RECEIVED

**HOW LIFE IS HANDED ON.** By Cyril Bibby, M.A., M.Sc., F.L.S., Senior Lecturer at the College of St. Mark and St. John, London; Sometime Scholar of Queens' College, London; Author of "Sex Education: A Guide for Parents, Teachers and Youth Leaders." New York: Emerson Books, Inc. 1947. Price \$2.00.

**OCULOROTARY MUSCLES.** By Richard G. Scobee, B.A., M.D., Instructor in Ophthalmology, Washington University School of Medicine, St. Louis, Mo. Illustrated. St. Louis: C. V. Mosby Company. 1947. Price \$8.00.

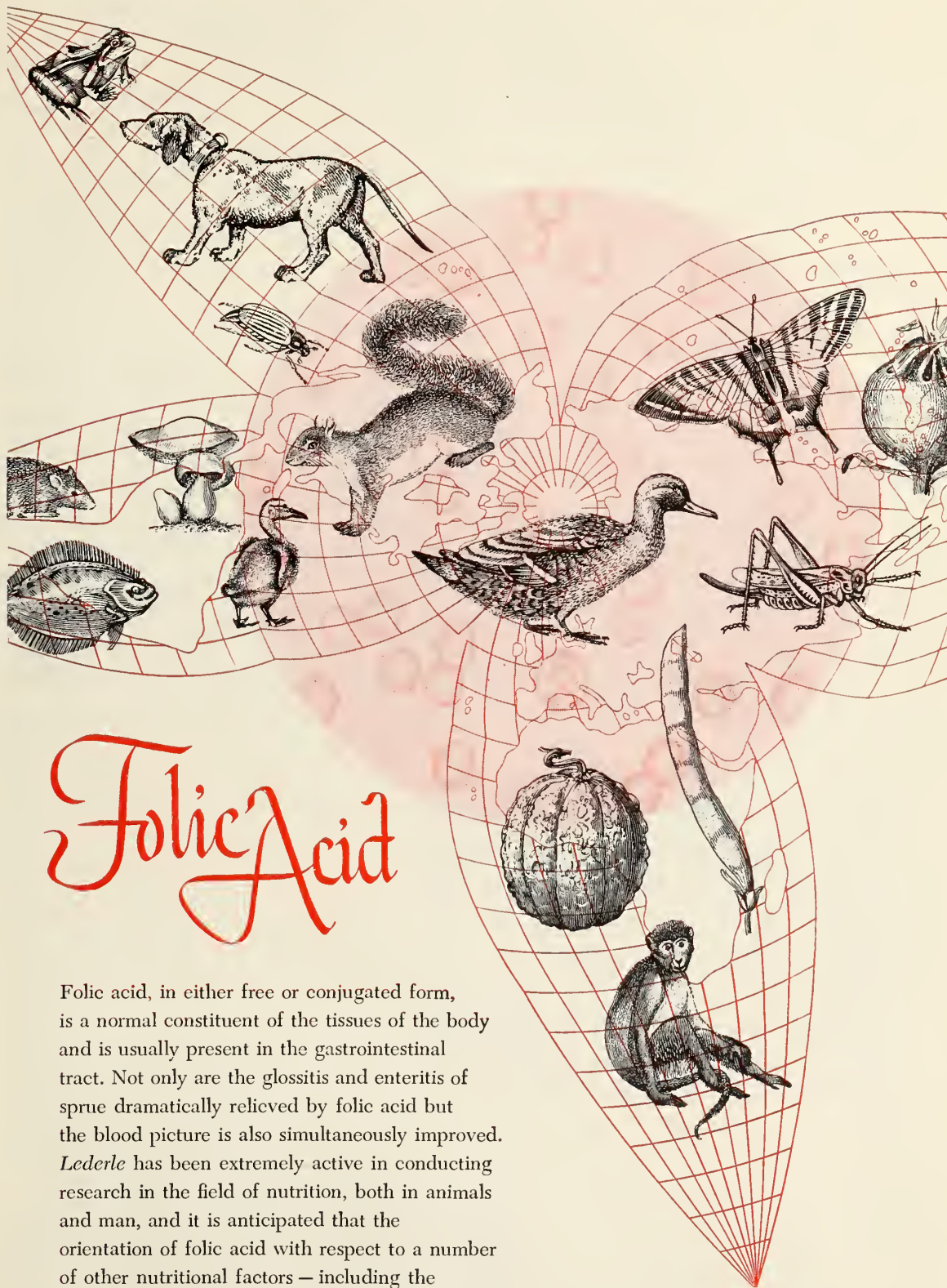
**SOCIOLOGY AND SOCIAL PROBLEMS, AN INTRODUCTION TO, A Textbook for Nurses.** By Deborah MacLurg Jensen, R.N., B.S., M.A., Assistant Director, School of Nursing, St. Louis City Hospital; Instructor in Nursing Education, Summer School, Simmons College, Boston; formerly Supervisor of Clinical Instruction in Nursing, University of Minnesota; Assistant Director, School of Nursing, Washington University, St. Louis; Assistant Professor in Nursing Education, Summer

**UNIPOLAR LEAD ELECTROCARDIOGRAPHY, Including Standard Leads, Unipolar Extremity Leads and Multiple Unipolar Precordial Leads.** By Emanuel Goldberger, B.S., M.D., Adjunct Physician, Montefiore Hospital, New York; Cardiographer and Associate Physician, Lincoln Hospital, New York; Diplomate of the American Board of Internal Medicine; Clinical Lecturer in Medicine, Columbia University, Faculty of Medicine. With 88 Illustrations. Philadelphia: Lea & Febiger. 1947. Price \$4.00.

**CARDIOLOGY, A PRIMER OF.** By George E. Burch, M.D., F.A.C.P., Associate Professor of Medicine, Tulane University School of Medicine; Senior Visiting Physician, Charity Hospital; Consultant in Cardiovascular Diseases, Ochsner Clinic; Visiting Physician, Touro Infirmary, New Orleans; and Paul Reaser, M.D., Instructor in Medicine, Tulane University School of Medicine; Assistant Visiting Physician, Charity Hospital, New Orleans. With 203 Illustrations. Philadelphia: Lea & Febiger. 1947. Price \$4.50.

**DISEASES OF THE NOSE, THROAT AND EAR.** By William Lincoln Ballenger, M.D., F.A.C.S., Late Professor, School of Medicine, University of Illinois, Chicago; and Howard Charles Ballenger, M.D., F.A.C.S., Asso-





# Folic Acid

Folic acid, in either free or conjugated form, is a normal constituent of the tissues of the body and is usually present in the gastrointestinal tract. Not only are the glossitis and enteritis of sprue dramatically relieved by folic acid but the blood picture is also simultaneously improved. *Lederle* has been extremely active in conducting research in the field of nutrition, both in animals and man, and it is anticipated that the orientation of folic acid with respect to a number of other nutritional factors — including the anti-pernicious anemia factor and the animal protein factor — will soon be made clear.

ciate Professor and Acting Chairman of the Department of Otolaryngology, Northwestern University School of Medicine, Chicago; Surgeon, Department of Otolaryngology, Evanston Hospital, Evanston, Illinois; Assisted by John Jacob Ballenger, B.S., M.D., Research Fellow in Otolaryngology, Northwestern University School of Medicine, Chicago. Ninth Edition, Thoroughly Revised; with 597 Illustrations and 16 Plates. Philadelphia: Lea & Febiger. 1947. Price \$12.50.

## MISCELLANY

### TUBERCULOSIS ABSTRACTS

*Issued Monthly by the National Tuberculosis Association*

#### IS AREA ERADICATION OF TUBERCULOSIS POSSIBLE?

Wade Hampton Frost in 1937 presented a thoughtful appraisal of the question "How Much Control of Tuberculosis?" After marshalling the available evidence, he concluded that in this country we had already reached a stage at which the biological balance was against the survival of the tubercle bacillus and that eventually this disease would disappear.

A British opinion of the same year was: "It is idle to speak of the conquest of tuberculosis; tuberculosis has not been and so far as one can see never will be conquered." This opinion was endorsed recently by Medlar who found many tuberculous pulmonary lesions unrecognized during life in persons in the older age groups coming to autopsy in New York City.

The question of the validity of Frost's thesis is of great practical as well as theoretical importance. His reasoning was briefly this: There were many and sound reasons for doubting that the rapid decline in tuberculosis in the preceding half century had been due *principally* to the measures which had been taken for the purpose of preventing infection. Without question the factors lumped together under the terms "advancing civilization and better living conditions" had played an important role. There was reason to believe, however, that the decline was due *in some part* to the efforts made to control the disease.

The direct attack has proved to be a more formidable undertaking than was at first realized, but in Frost's words: "If the effective control of tuberculosis required complete isolation of all open cases, . . . the present (i.e., 1937) status could not be considered encouraging, for . . . (many) such cases are discovered in a fairly advanced stage, and the isolation even of cases known to the authorities is probably less than 50 per cent complete. However, for the eventual eradication of tuberculosis, it is not necessary that transmission be immediately and completely prevented but only that the rate of transmission be held permanently below the level at which a given number of infection-spreading cases succeed in establishing an equivalent number (of 'open' cases) to carry on the succession. If the number of infectious hosts is continuously reduced, the end result . . . must be extermination of the tubercle bacillus."

He placed a single qualification upon his conclusion that "As to the maintenance of this balance, favorable to us, unfavorable to the tubercle bacillus, there are, of course, elements of uncertainty, among them uncertainty as to the stability of our civilization."

Only twelve years have passed—too short a period upon which to base inferences in regard to long-time trends—during which the very existence of civilization has been threatened. The world has undergone one of the greatest military, social, and economic upheavals in history. It is, therefore, pertinent to review the experience of this decade and inquire whether the Frost thesis is still tenable.

Despite their limitations, mortality rates provide the best available index of the biological balance over long periods of time. During the war years, mortality from tuberculosis increased in most of the western European nations involved in the conflict, while those countries that escaped the rigors of war were little affected. In western Germany the rate is still higher than in 1938. In Belgium and the Netherlands, as in England and France, the rate rose during the war, but by 1946 was already down to or below the 1938 level. In Denmark, Sweden, Switzerland and the United States, mortality continued downward during the war.

It appears, therefore, that the disturbances due to the war have been insufficient to effect more than a temporary setback in declining death rates. It would appear then that, where civilization is relatively advanced, the biological balance is still against survival of the tubercle bacillus.

To what extent this is due to indirect socioeconomic causes or indirectly to control measures is still a difficult question to answer. In the United States, progress has been made toward more effective measures of control despite the war. In the field of specific therapy the most important contribution was, of course, the discovery of streptomycin which is now receiving extensive clinical trial. Experience with it thus far gives hope that eventually an antibiotic may be discovered which will suppress growth of the microorganism in the tissue and rapidly terminate the infectious state in pulmonary tuberculosis. With such an agent, the seed-bed of the disease could be more rapidly reduced.

The search for a practical and effective method of artificial immunization has progressed. The techniques related to the use of BCG vaccine have been improved and its safety established. Critical trials support the judgment that this procedure affords some protection against post-primary tuberculous lesions for at least a limited period. Its long-range effect in reducing the incidence of pulmonary tuberculosis has yet to be determined. In the United States, BCG is still under investigation.

Thus, the past ten years have brought forth no really new principle of prevention. The main objective is still avoidance of exposure, and the strategy is still that of a frontal assault on discoverable sources of infection. Progress has also been made in "case finding" and isolation. The tools used in diagnosis have undoubtedly been sharpened.

While there are still manifest deficiencies in the preventive program, it is better than it was a decade ago. There are reasons for believing it is progressively reducing the frequency of transmission from infected to non-infected individuals.

Granting continuation or strengthening of control efforts in addition to favorable socioeconomic developments in a world at peace, it would seem not unreasonable to expect that the balance, favorable to us, unfavorable to the tubercle bacillus, will be maintained and that the decline in mortality from tuberculosis will be sustained, even to the point of disappearance from some areas. There is nothing in the record up to date that is inconsistent with Frost's thesis.

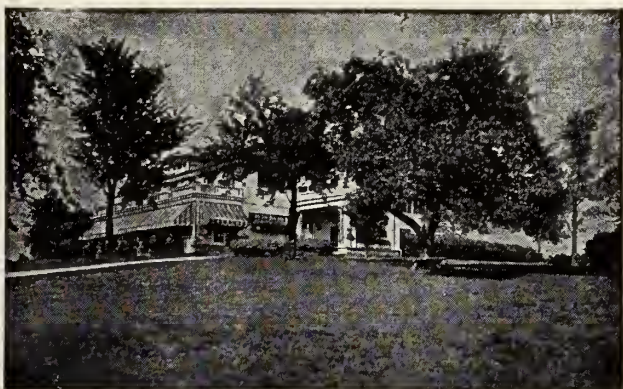


## City View Sanitarium

For the diagnosis and treatment of mental and nervous disorders, alcoholism and drug addictions.

Established in 1907 by the late John W. Stevens, M.D. 52 acres near city. Separate buildings for men and women. Two full time psychiatrists. Electric shock and insulin therapy in selected cases. Occupational therapy. Physiotherapy department. Adequate laboratory facilities.

NASHVILLE, TENNESSEE



## The Mary E. Pogue School

Complete facilities for training Retarded and Epileptic children educationally and socially. Pupils per teacher strictly limited. Excellent educational, physical and occupational therapy programs.

Recreational facilities include riding, group games, selected movies under competent supervision of skilled personnel.

Catalogue on request.

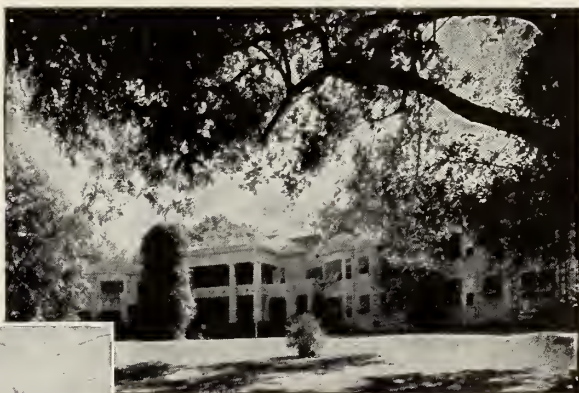
G. H. Marquardt, M.D. Barclay J. Macgregor  
Medical Director Registrar

27 Geneva Road, Wheaton, Illinois  
(Near Chicago)

## The Norbury Sanatorium

Established 1901—Incorporated—  
Licensed—Jacksonville, Illinois

• ALBERT H. DOLLEAR, B.S., M.D., Superintendent. FRANK GARM NORBURY, A.M., M.D., Medical Director. SAMUEL N. CLARK, M.D., Physician. HENRY A. DOLLEAR, M.D., Physician.



### Maplecrest

• Pictured above — Restful, congenial home-like surroundings are combined with the most modern diagnostic and therapeutic equipment.

### Maplewood

• Pictured at left — Most comfortable homes for individuals requiring rest, scientific diagnosis and treatment. Fireproof construction.

## COMMERCIAL ANNOUNCEMENTS

**FOR SALE:** Complete E.N.T. treatment unit—cabinet, chair, cuspidor, lamp, etc. Instruments are optional. Contact D. P. Ferris, M.D., 62 Grantwood Village, Affton 23, Mo.

**FOR SALE:** Complete office equipment, including X-Ray 100 Ma., 1946; Electrocardiogram, 1948, and short-wave Diathermy, 1948. All in perfect operating condition and practically new. Write Mrs. C. J. Mellies, 1036 N. Kingshighway, Sikeston, Mo.

**FOR SALE:** Active general practice in county seat town. Completely equipped new office. Practice will gross \$20,000 a year. This is an excellent opportunity. Will sell for \$8,000. Leaving because of asthma. Address Box 167, Missouri State Medical Association, 623 Missouri Bldg., St. Louis 3, Mo.

**BERNARD NURSING HOME:** Accepts patients who are chronically ill, disabled, aged or invalided, whose primary need is good nursing care. Our home is the finest in the state. It is beautifully furnished, centrally located, equipped with automatic sprinkler system and is adequately staffed. Address 4385 Maryland, St. Louis 8, Mo. Telephone Lucas 9290.

Hair Permanently Removed by Electrolysis

**DOROTHY WORRELL, R.N.**

233 N. Vandeventer, St. Louis

Telephone, Jefferson 9436

*Work Done on Prescription of Physicians Only*



Your instructions faithfully executed. Qualified, courteous orthopaedic technicians.

•

**THE  
W. E. ISLE  
COMPANY**

ENTIRE SECOND FLOOR  
1121 GRAND AVE.  
KANSAS CITY, MO.  
VICTOR 2350

**The Neurological Hospital,  
2625 The Paseo, Kansas City,  
Missouri. Operated by the Rob-  
inson Clinic, for the care and  
treatment of nervous and men-  
tal patients and associated  
conditions.**

## THE STOKES SANITARIUM

923 Cherokee Road,  
Louisville, Kentucky

Our **ALCOHOLIC** treatment destroys the craving, restores the appetite and sleep, and rebuilds the physical and nervous condition of the patient. Liquors withdrawn gradually; no limit on the amount necessary to prevent or relieve delirium.

**MENTAL** patients have every comfort that their home affords.

The **DRUG** treatment is one of gradual Reduction. It relieves the constipation, restores the appetite and sleep; withdrawal pains are absent. No Hyoscine or rapid withdrawal methods used.

**NERVOUS** patients are accepted by us for observation and diagnosis as well as treatment.

E. W. STOKES, Medical Director. Established 1904  
Telephone—Highland 2101

## INDEX TO ADVERTISERS

Abbott Laboratories .....	857
Ames Company, Inc. ....	824
Ayerst, McKenna & Harrison, Ltd. ....	831
Bilhuber-Knoll Corp. ....	830
Camel Cigarettes .....	833
Camp, S. H., & Co. ....	854
Canada Dry Ginger Ale, Inc. ....	885
Chicago Medical Society .....	861
City View Sanitarium .....	889
Cook County Graduate School of Medicine.....	858
Duncan Laboratories .....	891
Faith Hospital .....	836
Glenwood Sanatorium .....	871
Gradwohl Laboratories .....	885
Hamilton-Schmidt .....	836
Hanger, J. E., Inc. ....	885
Isle, W. E., Co. ....	890
Lederle Labs. ....	887
Lilly, Eli, & Co. ....	Insert
Major Clinic .....	825
Massachusetts Indemnity Insurance Co. ....	858
Mead Johnson & Co. ....	892
Medical Protective Co. ....	836
Mid-South Post Graduate Medical Assembly.....	867
Milwaukee Sanitarium .....	861
Mullen Ambulance .....	836
National Pathological Labs. ....	832
Norbury Sanatorium .....	889
North Shore Health Resort .....	877
Parke, Davis & Co. ....	822, 823
Physicians Casualty Assn. ....	832
Pogue, Mary E., School .....	889
Producers Creamery Co. ....	858
Quincy X-Ray & Radium Labs. ....	836
Ralph Sanitarium .....	834
Robinson Clinic, Inc. ....	890
St. Vincent's Sanitarium .....	832
Schering Corporation .....	865
Schmid, Julius, Inc. ....	869
Searle, G. D., & Co. ....	853
Stokes Sanitarium .....	890
University of Colorado Medical School .....	871
Upjohn Company .....	835
U. S. Brewers Foundation, Inc. ....	875
Wallace Sanitarium .....	830
Wander Company .....	829
Winthrop-Stearns, Inc. ....	827
Worrell, Dorothy .....	890



*Your* **LABORATORIES**  
*Our* **RESPONSIBILITY**

CLINICAL PATHOLOGY  
PATHOLOGIC ANATOMY

**DUNCAN LABORATORIES**

*Established 1924*

909 Argyle Bldg. **KANSAS CITY 6, MO.**  
230 Frisco Bldg. **JOPLIN, MISSOURI**

RALPH EMERSON DUNCAN, M.D.

MAURICE L. JONES, M.D.

In addition to diagnostic laboratory services, chemically accurate and clinically tested reagents, solutions, stains and culture media are available for immediate delivery.



# Flexible Formula

## FOR AN INDIVIDUALIST

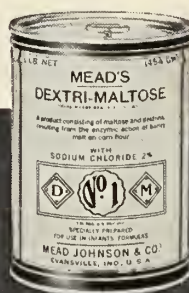
PHYSICIANS concerned with infant feeding have found that the exceptional *flexibility-of-use* offered by Dextri-Maltose\* is an important advantage in adapting formulas to the individual requirements of the baby.

By the inclusion of Dextri-Maltose in appropriate amount, the caloric value and carbohydrate content of a formula can easily be adjusted to the infant's special needs.

Since the physician has 5 forms of Dextri-Maltose available, an individual infant's formula may be changed according to various clinical or physiologic indications without disturbance of his routine.

Being a mixture of carbohydrates, Dextri-Maltose offers special qualities of digestibility and slowness of absorption. Hence it is an ideal carbohydrate for use in diarrhea and other gastrointestinal disturbances.

Dextri-Maltose dissolves rapidly in water or milk. It can be used in *your* preferred method of formula preparation. \*T.M. Reg. U.S. Pat. Off.



**MEAD'S**

**MEAD JOHNSON & CO.**  
EVANSVILLE 21, IND., U.S.A.









418169



